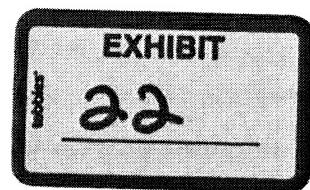


Exhibit 46

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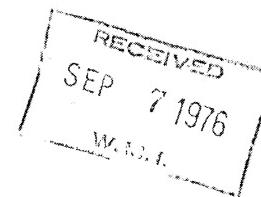


cc: Mr. W. Ashton Dr. B. Semple Section File
Dr. L. Brickman Mr. C. Zeitz, Windsor Minerals
Mr. H. Cohen Central File
Dr. G. Hildick-Smith Johnson & Johnson
✓ Mr. R. Miller, Windsor Minerals
Dr. W. Nashed
Dr. F. R. Rolle to Dr. A. J. Goudie New Brunswick, N.J.
Dr. D. R. Petterson
August 31, 1976

Subject: Examination of Vermont 66 Talc by X-Ray Diffraction and Differential Thermal Analysis

Project #0503.01

Dr. J. P. Schels
to
Mr. G. Lee



The following composite samples of Vermont 66 talc have been analyzed by (1) continuous scanning x-ray diffraction for qualitative mineralogical analysis (2) slow-scanning x-ray diffractometry of a compressed pellet for the presence of amphibole minerals (CTFA Method J4-1) and (3) differential thermal analysis for the presence of quartz and serpentine minerals:

5/10 - 5/15/76	7/6 - 7/10/76
5/17 - 5/22/76	7/12 - 7/16/76
5/24 - 5/29/76	7/19 - 7/23/76
6/1 - 6/4/76	7/26 - 7/30/76
6/7 - 6/11/76	8/2 - 8/6/76
6/14 - 6/18/76	8/9 - 8/13/76
6/21 - 6/25/76	8/16 - 8/20/76
6/28 - 7/2/76	

The samples examined appear to be typical of Vermont 66, except for the presence of higher levels of chlorite than is normally present. Previous chlorite levels were approximately 1% w/w; current levels have been estimated at 1% - 3% w/w. (Both the x-ray diffraction patterns and the differential thermograms indicate the presence of two varieties of chlorite). No amphibole (including tremolite) or serpentine (including chrysotile) minerals or quartz were detected in these talc samples.

Regina Gallagher
Regina Gallagher

dlw

Johnson & Johnson

New Brunswick, N.J.
October 6, 1976

Subject: EXAMINATION OF VERMONT 66 TALC BY X-RAY
DIFFRACTION AND DIFFERENTIAL THERMAL ANALYSIS
PROJECT NO. 0503.01

Dr. J. P. Schelz
to
Mr. G. Lee



The following composite samples of Vermont 66 talc have been analyzed by (1) continuous scanning x-ray diffraction for quantitative mineralogical analysis (2) slow-scanning x-ray diffraction for the presence of amphibole minerals (CTFA Method J4-1) and (3) differential thermal analysis for the presence of quartz and serpentine minerals:

8/23 - 8/29/76	9/7 - 9/10/76
8/30 - 9/3/76	9/20 - 9/24/76

The chlorite level was again noted to be several percent higher when compared to lots of Vermont 66 talc produced prior to 1976.

No quartz, serpentine minerals or amphibole minerals were detected in these weekly composite talcs.

Regina Gallagher
Regina Gallagher

gm

cc: Mr. W. Ashton
Dr. L. Brickman
Mr. H. Cohen
Dr. G. Hildick-Smith
Mr. R. Miller, Windsor Minerals ←
Dr. W. Nashed
Dr. F. R. Rolle to Dr. A. J. Goudie
Dr. D. R. Petterson
Dr. B. Semple
Mr. C. Zeitz, Windsor Minerals
Central File
Section File



walter c. mccrone associates, inc.

CONSULTING: ULTRAMICROANALYSIS • MICROSCOPY • SMALL PARTICLE PROBLEMS • SOLID-STATE CHEMISTRY

Copy

1 July 1975

Mr. Vern Zeitz
Windsor Mineral Company
P. O. Box 680
Windsor, VT 05089

Dear Mr. Zeitz:

We have examined two groups of samples using electron microscopy and selected area electron diffraction to determine the extent of amphiboles or serpentine contamination in these two groups of samples. The first group consisted of 29 talc samples which were taken from your ore body. The second group consisted of 7 samples which were sent to us subsequently to be analyzed separately. The general conclusion that we came to in this study is that these samples do show some amphiboles but at an extremely low level. We did not find any chrysotile (serpentine asbestos) in any of these samples.

In examining the samples we kept a running tabulation of the asbestos which we could positively identify, the total fiber content and the organic material present in each sample. These are listed qualitatively as 0 for none found, low for 1 to 3 fibers found, medium for about 4 to 8 fibers, high and very high. In no case did the asbestos content exceed medium. We did find indications of blocky talc in some of these and also other silicates and rolled talc. The silicates and rolled talc would be lumped into the general "other fiber" category. The organic material consisted of bacteria, amorphous structures which generally seem to be organic in nature, materials which bubbled in the beam and general crud which we find in some of the samples.

Some of the samples showed extreme amounts of sedimentation in the bottom of the test tube when we prepared these samples. Samples of these sediments were, therefore examined separately. A general comparison of the fines and the sediments indicates that the fines which are in suspension contain more fibers than the settled material.

The listings from our visual observations at the microscope are given in Tables 1 and 2. A photographic record was made of all the fibers observed. A more complete sample analysis based on these photographic plates is listed in Table 3.

If there are any further questions concerning this report or the data contained herein, please feel free to contact me.

Very truly yours,

Gene R. Grieger
Gene R. Grieger
Research Physicist

Enclosures
GRG:smg
Ref. MA-4055

2820 SOUTH MICHIGAN AVENUE • CHICAGO, ILLINOIS 60616 • 312/842-7100 • CABLE: CHEMICRONE

TABLE 1

Description of sample content of fines

Sample No.	Confirmed asbestos, visual	Fibers rolled talc silicates etc.	Organics
W-GI	0	Medium	Medium
Bl-GI	0	Low	Low
Bl-WI	0	Medium	High
Fl-WI	Low	Low	Medium
Y-GI	0	Low	V. high
W-HC	0	Low	High
V-HC	0	0	Low
Z-GT	0	Low	Medium
Y-HC	0	Medium	Medium
DL-HC	0	0	Medium
Gl-HC	0	Low	Low
X-HC	Low	Medium	Low
Fl-HC	Medium	Low	Low
V-WI	0	Medium	Low
V-GI	Low	Low	Low
E1-HC	Low	Low	High
Gl-WI	Low	Medium	Medium
Cl-HC	0	Medium	Medium
D1-GI	0	Low	High
Cl-GI	Low	Medium	Medium
U-GI	0	Low	V. high
H1-HC	0	0	V. high
H1-WI	0	Low	V. high
Bl-HC	Low	Low	0
E1-GI	0	Low	High
A1-HC	0	Low	Medium
E1-WI	0	0	Medium
Z-HC	Low	0	Medium
D1-WI	0	0	Medium

TABLE 2
Description of sample content of sediment

Sample No.	Asbestos	Fibers	Organics
HI-WI	0	0	Medium
BL-HC	0	0	Low
EI-GI	Low	0	Low
Y-GI	0	0	Medium
U-HC	0	0	Low
W-GI	0	Low	Low
Z-GI	0	Low	Low
EI-WI	Low	Low	Medium
GI-HC	0	Low	Low
Y-HC	0	0	Low
DI-GI	0	0	0
FI-WI	0	Low	Low
W-HC	0	0	Medium
V-WI	0	Medium	Medium
U-GI	0	Low	0
Z-HC	Low	Low	Low
X-HC	0	Low	Low
CI-HC	0	0	Medium
DI-HC	0	0	Medium
D-HC 7/22	Low	Low	Low
D-WI 7/15	0	Low	Low
D-GI 7/15	0	Low	Low
F-HC 9/3	0	Low	Low
H-GI 9/16	0	Low	Medium
I-WI	0	Low	Medium
P-GI	Low	Low	Medium

TABLE 3

Sample content, based on photomicrographs

D1-HC	Blocky talc, 2 silicate fibers
X-HC	2 amphiboles, 1 talc hard
F1-HC	2 bundles of amphiboles, 2 single amphibole fibers
V-WI	2 silicates
V-GI	2 amphibole and 1 amphibole-like fiber without diffraction pattern
	2 talc ribbons, fine particulate contamination and organic crud
G1-WI	blocky talc, talc fibers, silicates and 1 amphibole
C1-HC	bacteria, silicates, blocky talc and organic fibrils
W-GI	rolled talc, organic fiber and talc ribbons
B1-GI	silicates and talc ribbons
B1-WI	blocky talc, crystalline square particles
Y-GI	some organic material, fine crystalline particles about 500 Å in size and silicates
F1-WI	large particles, 1 amphibole, 1 fibrous antigorite, silicates and rolled talc
W-HC	blocky talc and organic material
Y-HC	silicates
V-HC	organic material
B1-HC	rolled talc fibers, blocky talc and 2 amphibole bundles
H-WI	lots of organic material, 1 amphibole
U-GI	organic material, blocky talc and silicates
C1-GI	silicates, talc ribbon, fibrous talc, blocky talc, organic fibers and 2 bundles of amphibole
D1-GI	blocky talc, organic material, rolled talc and silicates
C1-HC	1 amphibole and fibrous talc
V-WI	silicates
Z-HC	small square particulate matter about 1000 Å, 3 bundles of amphibole
D1-WI	1 amphibole, fine particles, fibrous talc and blocky talc
A1-HC	silicates
E1-WI	blocky talc
D-HCS*	1 bundle of silicates and blocky talc
U-GIS	blocky talc
Z-HCS	1 bundle which looks like amphibole, no diffraction pattern available
X-HCS	silicates
D1-HCS	fine particles
W-GIS	1 rolled talc, 1 amphibole and 1 silicate
V-HCS	clean
D-HIS	silicates and talc ribbons
D-GIS	organic fibrils
FHCS	clean
I-WIS	blocky talc and 2 silicates
P-GIS	1 bundle of amphiboles, 1 blocky talc fiber
Q-HCS	clean
F1-WIS	clean
D1-GIS	clean
Y-HCS	some blocky fibrous talc

* S indicates sediment sample

TABLE 3 (continued)

E1-WIS*	2 amphiboles
Z-GIS	1 amphibole
E1-GIS	clean
B1-HCS	silicates
H1-WIS	crystalline contamination

* S indicates sediment sample

Exhibit 47

9-11-75

Mr. Ian Stewart

from

V. Zeitz

RECEIVED SEP 13 1975

This is the copy you requested.

WIND-04055-0026



Plate 4681 A-HC 51,000X

Talc ribbons

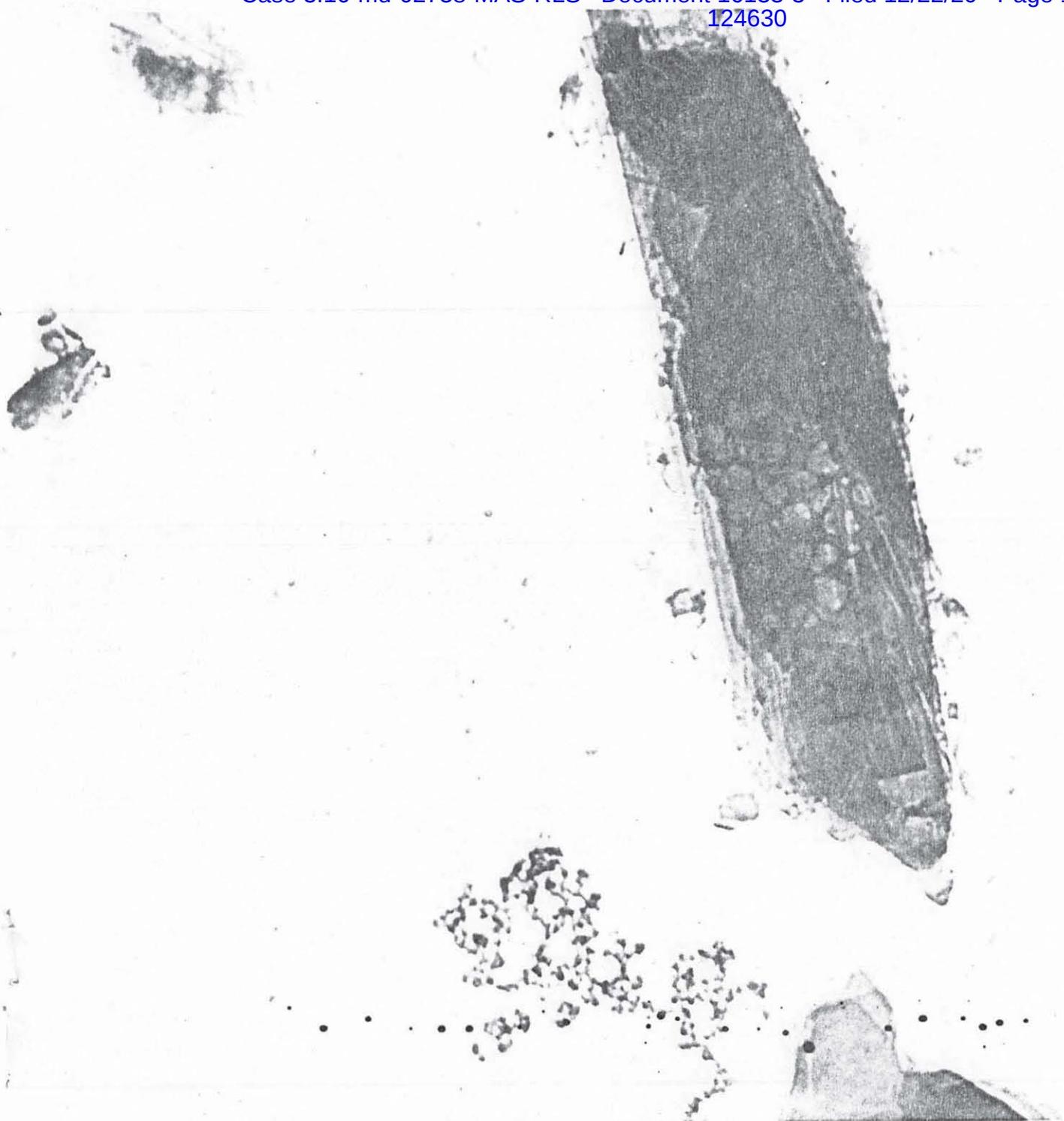


Plate 4682 A-HC 51,000X
Chrysotile fiber

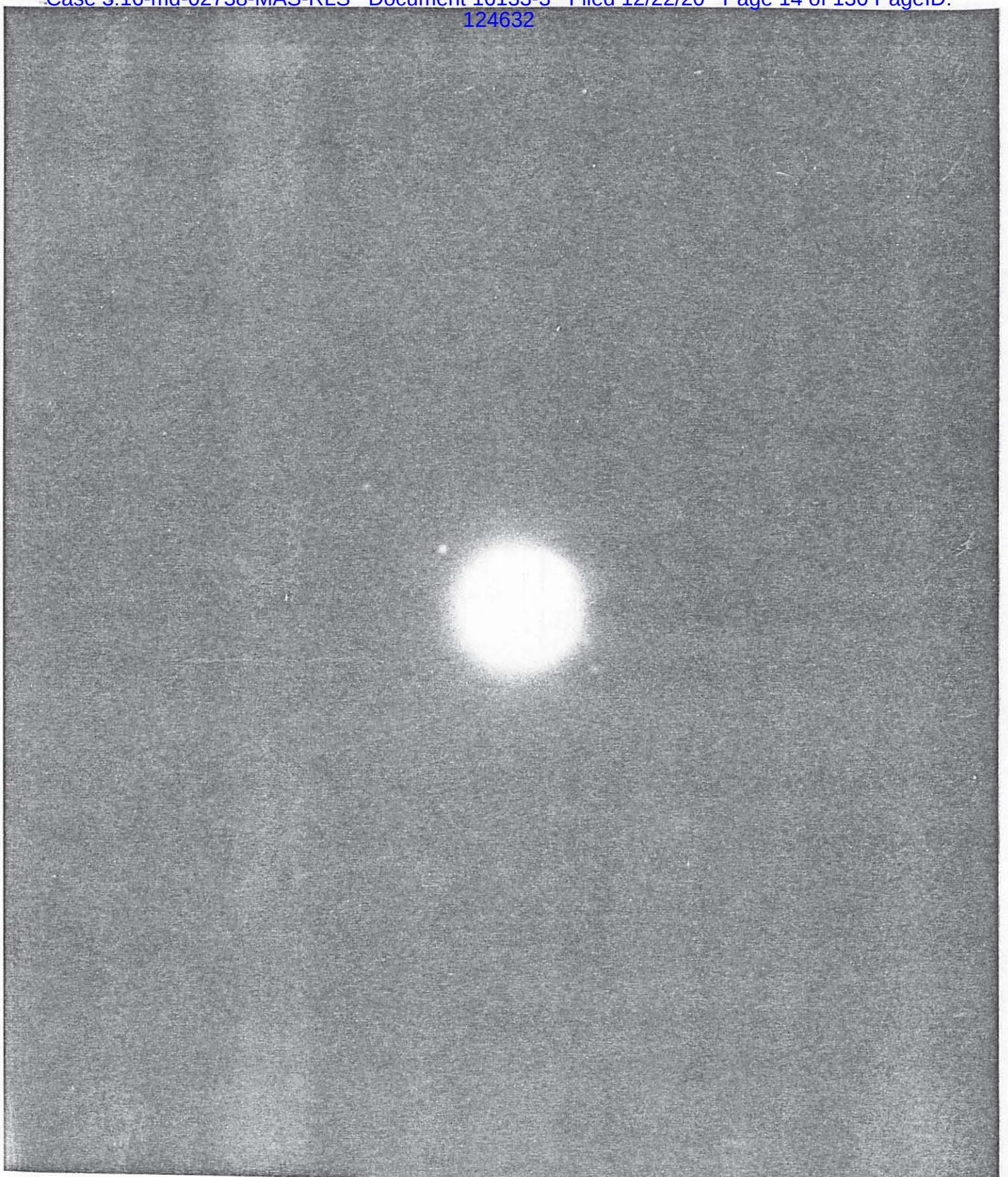


Plate 4683 A-HC

Diffraction pattern of Plate 4682
subject

Exhibit 48



walter c. mccrone associates, inc.

CONSULTING: ULTRAMICROANALYSIS • MICROSCOPY • SMALL PARTICLE PROBLEMS • SOLID-STATE CHEMISTRY

free

5 November 1975

Mr. Vernon Zeitz
Windsor Minerals Company
P. O. Box 680
Windsor, Vermont 05089

Dear Mr. Zeitz:

This letter will supplement our report of 1 July 1975 on a series of talc ore samples which we have analyzed for you. Table 1 shows the actual fiber counts and the approximate equivalent concentration in parts per million of the amphibole particles which we found in these samples. Some of them seemed rather high, one had 10 and one had 9 amphiboles. Most of these come in bundles of 1, 2 or 3 fibers with anywhere from 2-5 amphiboles in a bundle.

The examination of the fines suspension seems to be much more sensitive to the presence of amphibole than looking at the sediments. In several occasions we found amphibole particles in the fines which we did not find in the sediment. Since most of these amphibole particles are rather small they would stay suspended in our ultrasoneration procedures, whereas the larger, blocky, amphiboles or chunks of amphiboles generally are not fibrous and are obscured by the large talc particles which are in the sediment. I would suggest that when we analyze these we should concentrate primarily on examining the fine fraction of the ultrasoneration suspension.

Thank you for consulting McCrone Associates and if there are any further questions concerning this report, please feel free to contact me.

Yours sincerely,

Gene R. Grieger
Gene R. Grieger
Senior Research Physicist

GRG:fe
attach.
ref: 4055

JNJ000578954

Metadata

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Table 1

Sample Number	Date	Fibers of Asbestos	SEDIMENT		
			Fines PPM	Number of Fibers	PPM
D-HC	7/22/74	-	7/26/74	2	0.2
D-GI	7/15	-	7/29	0	0.0
F-HC	9/13	-	9/7	0	0.0
H-WI	9/16	-	9/23	0	0.0
I-WI	9/23	-	9/28	0	0.0
P-GI	10/28	-	11/1	4 amph.	0.4
Q-HC	11/4	-	11/8	0	0.0
U-HC	12/2	-	12/6	0	0.0
U-GI	12/2	-	12/6	0	0.0
V-WI	12/9	-	12/20	0	0.0
V-HC	12/9	-	12/13	0	0.0
V-GI	12/9	-	12/16	2 amph.	0.3
W-HC	12/16	-	12/20	0	0.0
W-GI	12/16	-	12/20	0	0.0
X-HC	12/26	-	12/28	2 amph.	0.2
Y-HC	12/30	-	1/3/75	0	0.0
Y-GI	12/30	-	1/6/75	0	0.0
Z-HC	1/6/75	-	1/10/75	9 amph.	2.0
Z-GI	1/6	-	1/13	4 amph.	0.4
Z-GI	1/6	-	1/13	0	0.0
A1-HC	1/13	-	1/17	0	0.0
B1-HC	2/24	-	2/28	5 amph.	1.5
B1-WI	2/24	-	3/7	0	0.0
B1-GI	2/24	-	3/3	0	0.0
C1-HC	3/3	-	3/7	0	0.0
C1-GI	3/3	-	3/10	6 amph.	1.5
D1-HC	3/10	-	3/14	0	0.0
D1-WI	3/10	-	3/14	0	0.0
D1-GI	3/10	-	3/17	0	0.0
E1-HC	3/17	-	3/21	2 amph.	0.2
E1-WI	3/14	-	3/21	0	0.0
E1-GI	3/17	-	3/24	0	0.0
F1-HC	3/24	-	3/29	10 amph.	2.0
F1-WI	3/24	-	3/29	1 amph.	0.1
				1 antigorite	0.1
G1-HC	3/31	-	4/4	0	0.0
G1-WI	3/31	-	4/4	1 amph.	0.1
H1-HC	4/7	-	4/11	0	0.0
H1-WI	4/7	-	4/11	0	0.0
D -WI	7/15	-	8/2	0	0.0
H -GI	9/16	-	9/23	0	0.0

Walter C. McCrone Associates, Inc.

JNJ000578955

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Exhibit 49



walter c. mccrone associates, inc.

CONSULTING: ULTRAMICROANALYSIS • MICROSCOPY • SMALL PARTICLE PROBLEMS • SOLID-STATE CHEMISTRY

19 November 1975

Mr. Vernon Zeitz
Windsor Minerals Company
P. O. Box 680
Windsor, Vermont 05089

Dear Mr. Zeitz:

We have analyzed your latest series of 24 talc ore samples dated 9-2-75, for asbestos minerals. In the entire series we found only two asbestos minerals, both amphiboles, one in Sample N1-HC of a size equivalent to a concentration of approximately 0.1 ppm and one in Sample O1-HC equivalent to approximately 0.3 ppm.

All of the observations were made in the transmission electron microscope. Most of the talc seemed to be of very good quality: Only Sample C-LI showed only fair quality talc with some blocky talc in it. A description of the observations is included in Table 1, "TEM observations on 9-2-75 samples."

In some of these samples we found what appeared to be an inorganic component. We did selected area electron diffraction on these particles and also energy dispersive x-ray analysis on some of the particles in our EMMA-4. The conclusions that we came to from our electron diffraction data was that this material was residues of the carbonate phase not removed during beneficiation. Our energy dispersive x-ray analysis in the EMMA-4 indicated high calcium and magnesium, traces of iron and very low quantities of silica. Taken in conjunction with the electron diffraction data this indicates that it probably is a dolomitic carbonate.

In summary, then, most of these talcs seem to be of quite good quality with a negligible level of amphiboles detected in only two of the samples.

Thank you for consulting McCrone Associates. If you have any questions concerning this report, please do not hesitate to call me.

Yours sincerely,

Gene R. Grieger
Senior Research Physicist

GRG:fe
attach.
ref: 4055

2820 SOUTH MICHIGAN AVENUE • CHICAGO, ILLINOIS 60616 • 312/842-7100 • CABLE: CHEMCRONE

J&J-0123236

TEM Observations on 9-2-75 Samples

Sample

I1-WI	Very platy, some ribbons and fiber silicates
Q1-HC	Blocky inorganics
K1-WI	Large plates, a few ribbons and fibrous silica
B-PC	Excellent talc
A1-GI	Good talc, some ribbons and silicates
P1-HC	Excellent talc, some fibrous silicates
A-PC	Excellent talc, very platy
S1-HC	Good talc - moderate, blocky inorganic fines
A1-WI	Moderate quality, some ribbons, shards and blocky material
R1-HC	Good talc, bacteria flagellae
M1-HC	Organic fibers, bacteria flagellae
F1-GI	Blocky inorganics
A-LI	Blocky inorganics
B-LI	Blocky inorganics
N1-HC	Blocky inorganics, 1 amphibole, ~0.1 ppm
C-LI	Fair quality, some blocky talc
G1-GI	Organic sediment
J1-HC	Moderate quality, not too flaky
K1-HC	Good talc
C1-WI	Very good talc
I1-HC	Good talc
J1-WI	Good talc
O1-HC	Good talc, 1 amphibole, ~0.3 ppm
L1-HC	Good talc

Walter C. McCrone Associates, Inc

J&J-0123237

Exhibit 50

JNJ000064762

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7/5/76

MINERALS IN BABY Powder

OLD Lot 228P → 0.09% > 2.8 S.G.

CURRENT Lot 009G → 0.04% > 2.8 S.G.

Optical Mic shows small (1%) amounts
of amphibole NEEDLES. Hand PICKED
NEEDLES TO BE IDENT. BY GANDOLFI CAMERA

XRD ON > 2.8 Fractions

MAGNESITE

DOLOMITE

PYRRHOTITE Ni+Fe sulfide

PYRITE

CHLORITE

PENTLANDITE Ni-Fe sulfide

RUTILE TiO₂

COBALT: NO COBALT MINERALS FOUND FREE;

228P → 61.2 PPM COBALT

↳ S.G.
 < 2.8 → 60.0 " "

J&J-0082407

JNJ000265171

Metadata

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Custodian	Legacy 1	ORIGINAL
DocumentType	Physical	ORIGINAL

Johnson & Johnson

BABY PRODUCTS COMPANY

NEW BRUNSWICK, N. J. 08903

March 16, 1976

Dr. J. Krause
Mining Division
Colorado School of Mines Research Institute
Golden, Colorado 80401

Dear Jerry:

This confirms my telephone conversation yesterday authorizing you to reopen our account on Special Talc Studies.

You will receive this afternoon, two nine ounce bottles of our Baby Powder. The codes for the lot numbers are on the bottom. The one code is 228P which is a production lot of our product of a couple of years ago on which we have extensive animal and physical data. The other lot is a random sample right off our production lines as of January of this year and is coded 009G.

Proceed to examine the high grade talc particles in these products with a view to establishing that Nickel and Cobalt is in the talc lattice in solid solution state.

I would expect nickel to run around 2000 ppm whereas Cobalt might be zero to perhaps 50 ppm or thereabouts. I realize that might be below the threshold of Cobalt detection on the electron probe.

Keep in touch by telephone, here or at home as required.

Very truly yours,

W. H. Ashton

WA:by
cc: G. Lee ✓
D. R. Petterson

570

Exhibit 51



● University College, Cardiff

Postal Address: University College, Newport Road, Cardiff CF2 1TA.
 Telephone Cardiff 442111 Telegrams: Coleg Cardiff
 Ext. 7062
 From..... Dr. E.D. Pooley.....
 Department of..... Mineral Exploitation.....

FDP/JT

25th January 1977

Dr. F.R. Rolle,
 36 Heather Drive,
 Somerset,
 New Jersey 08873 U.S.A.

Dear Bob,

Sorry to have been so long in replying to your request about chlorite but we have been side-tracked a little by some other material in the sample which you sent us. The X-ray data which we have taken from the composite sample we have compared with the 228 p and also the 6/30 sample which you sent us last year. We have also included another Vermont sample from Windsor Minerals for comparison labelled 'Cleaner Concentrate'. The variation in the chlorite content can be observed best from an examination of the talc and chlorite peaks occurring in the $24^\circ - 27^\circ 2\delta$ positions as illustrated by the accompanying figure. If we assume that the talc % is changing very little then the magnitude of the talc peak will also change very little. However large changes in the chlorite content i.e., doubling, will be reflected in large changes in the chlorite peak with respect to the talc peak. If we assume that the 228 p contains 2% chlorite then taking the talc to chlorite peak ratios for the other samples we obtain chlorite contents of approximately 3% for the 6/30 sample, 3 - 4% for the Vermont composite and 4% for the cleaner concentrate sample.

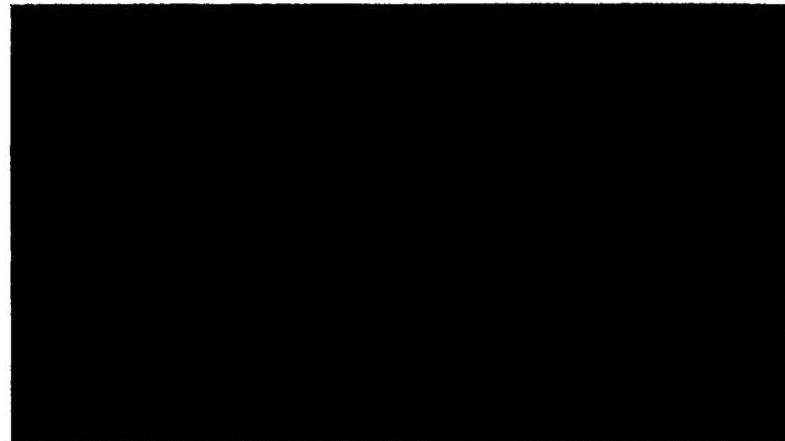
The 'cleaner concentrate' sample is one supplied to J and J Great Britain for consideration for use here. The general conclusion from X-ray data therefore is that the Vermont composite sample contains twice as much chlorite as the 228 p sample. The ratios also agree using the other chlorite peak at $12.5^\circ 2\delta$ for ratio purposes against the small talc reflection at $26^\circ 2\delta$.

I mentioned that we had been distracted by other material in the Vermont composite sample when we came to perform some confirmatory Edax and microscope work and before reporting the chlorite content this way I would be grateful if you could send me a much larger sample of Vermont composite and also a large sample of 228 p (about 100 grams of each will do). We have found in the V. composite fibres of Antigorite which I would like to confirm using another sample. Also if you could check with Windsor Minerals whether their talc ore source has changed over the past year or so. I will let you have data etc. on our findings when we have looked at another sample.

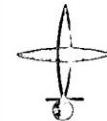
I will get this in the post now so that you can get material back to me as quickly as possible.

Yours sincerely,

Exhibit 52



EMV ASSOCIATES INC



MICROANALYSIS LABORATORY
15825 Shady Grove Road
Rockville, Maryland 20850



Consultant Report to
Johnson & Johnson

9 TALC SAMPLES

April 1, 1977

Prepared by:
EMV ASSOCIATES, INC.

Randall C. Ross
Staff Geochemist

John M. Wehrung
Executive Vice President



This report gives the results of analysis for nine talc and rock samples and discusses new preparation and examination techniques that have been implemented to supplement previous techniques. Other than this, examination is as described in previous reports.

It became evident during the last set of analyses that some particles of the largest talc fraction were being biased against during normal sample preparation. Because tremolite is often present in this size fraction and is apparently less susceptible to comminution than talc, two preparations are now being examined: one is as before, another is a slurry of the bottom fraction of talc dispersed and decanted with ethyl alcohol. It is seen that this new technique is more effective for the location and characterization of larger tremolite particles. The results are presented chronologically as follows. See certificates for quantitation of results.

D ground: No asbestos detected. One non-talc mineral located, see Figure 2.

A composite: Both large and small fibrous tremolite particles found, see Figure 4.

Old Stock Composite: One small, fibrous tremolite particle was found, see Figure 6.

Sample 14 and 15: Representative samples here were prepared by applying dilute slurry of sample to Nuclepore, but without decantation, see Figure 7. This technique was also used for samples 16, 17 and 18, 19 and 20, and 21 and 21II. Tremolite particles here were found in



several experimental types of preparations, however. Fibrous and non-fibrous tremolite are shown in Figures 8, 9, and 10.

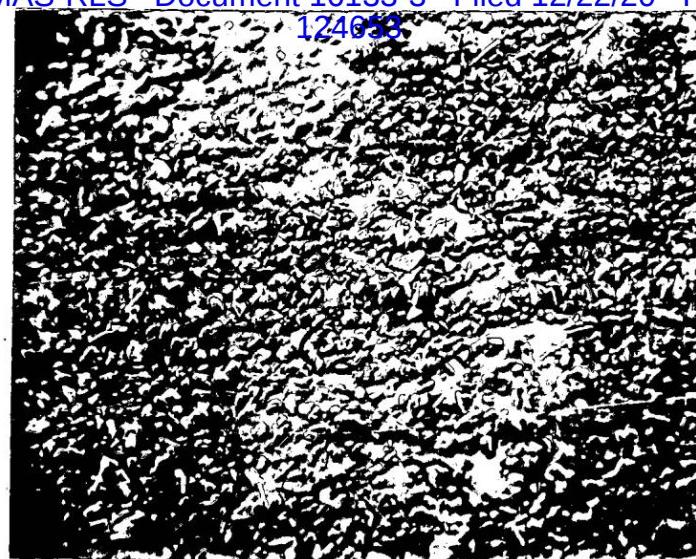
Sample 16: Only non-fibrous tremolite was seen here, see Figure 12. Two particles that do not resemble anthophyllite, but have talc spectrum and possible fibrous habit are shown, Figure 13.

Samples 17 and 18, 19 and 20, 21 and 21III: No asbestos particles were found. Figure 17 shows fiber glass particle that was discovered in sample 21 and 21III.

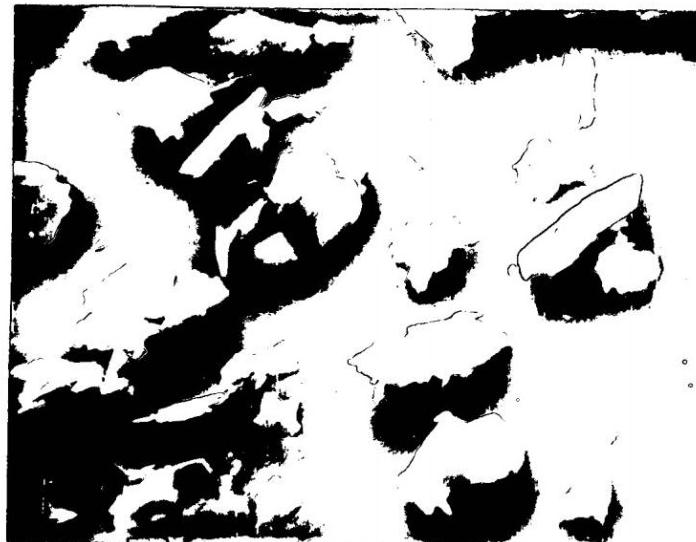
B composite: This sample represents what is hoped to be a successful preparation technique for detecting small numbers of large tremolite particles. This sample was prepared as described in the second paragraph of the report. Figures 18 and 19 show the two types of samples that will be prepared for each sample. One non-fibrous tremolite particle was found in the larger fraction, Figure 20.

124033

EMV
ASSOCIATES



150X



1500X



15,000X

Figure 1. D ground, representative micrographs.

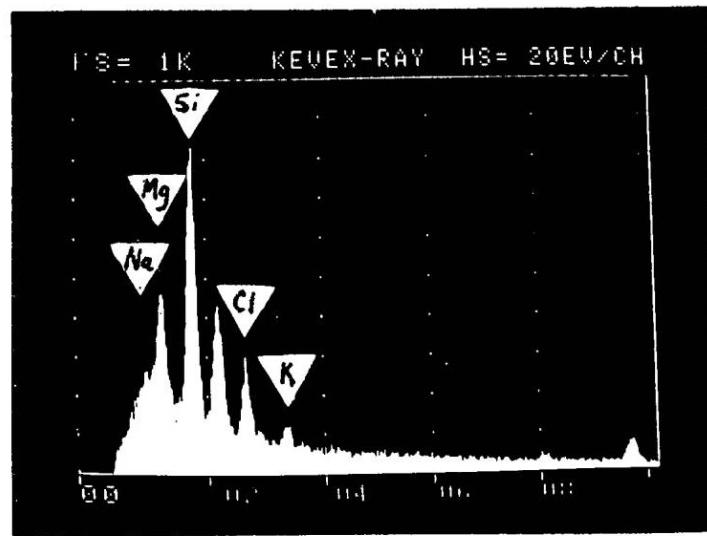
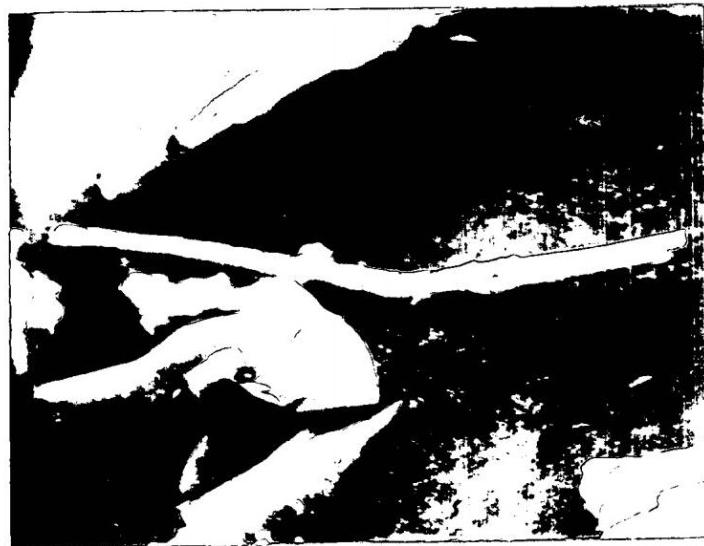


Figure 2. D ground, non-talc, non-asbestiform mineral with indicated composition, 3000X.



150X



1500X



15,000X

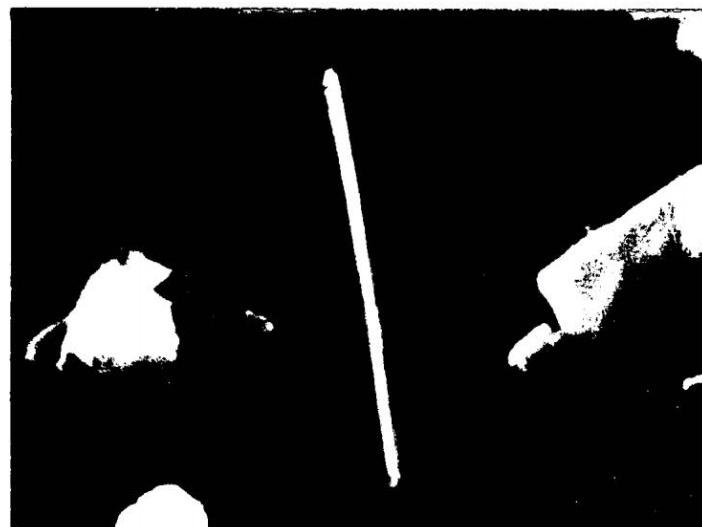
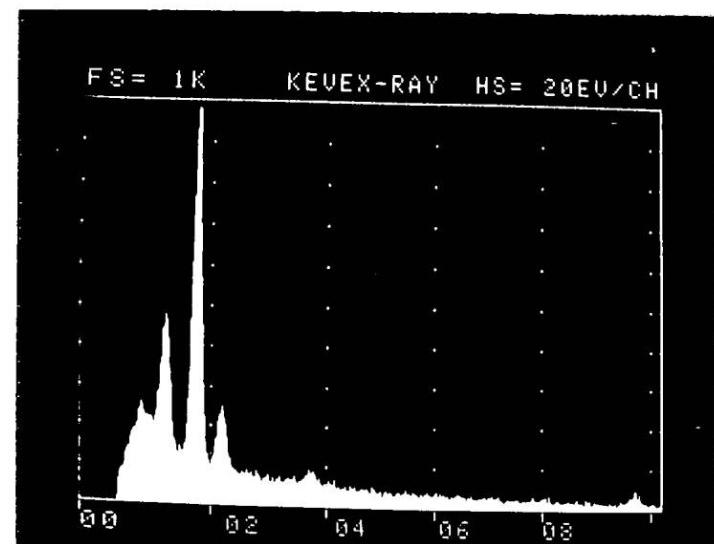


6,000X

Figure 3. A composite, representative fields and interesting platelet configuration.



1500X



8000X

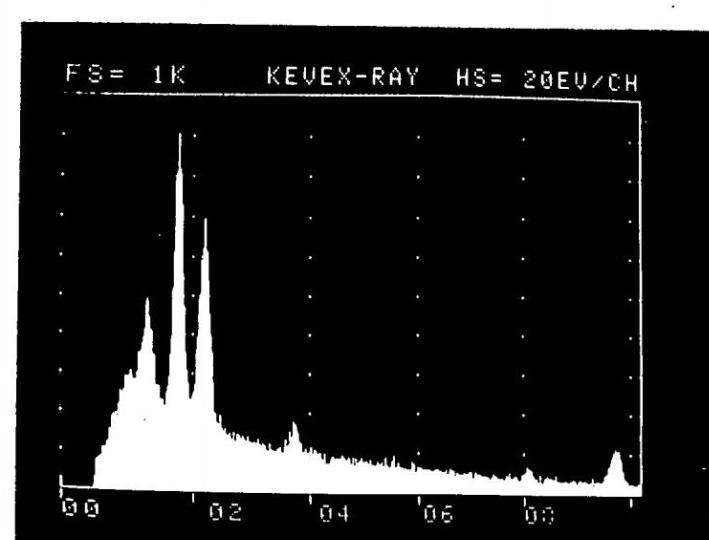
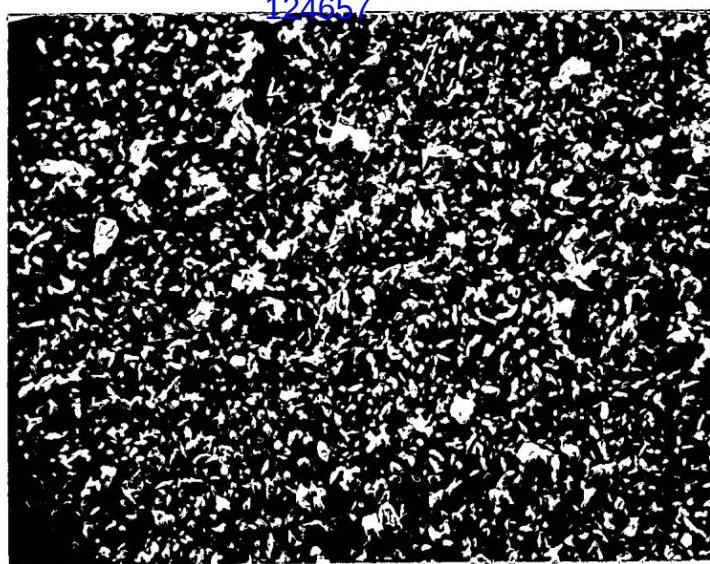


Figure 4. A composite, low Fe tremolite particles.



150X



1500X



15,000X

Figure 5. Old stock composite, representative micrographs.

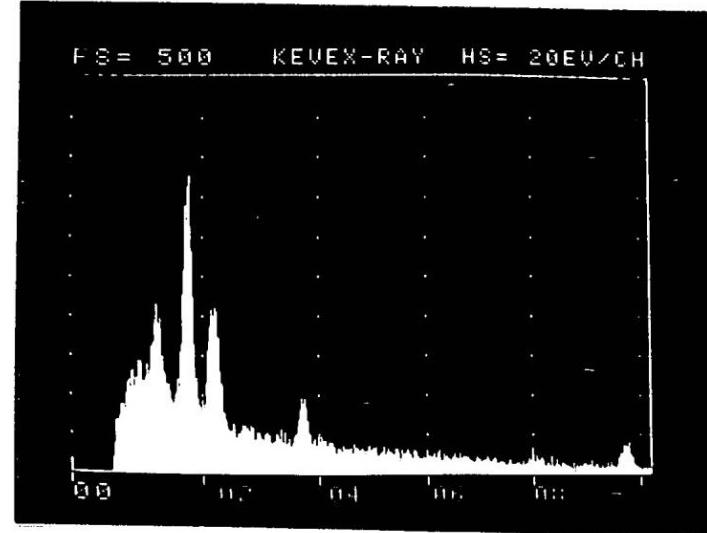
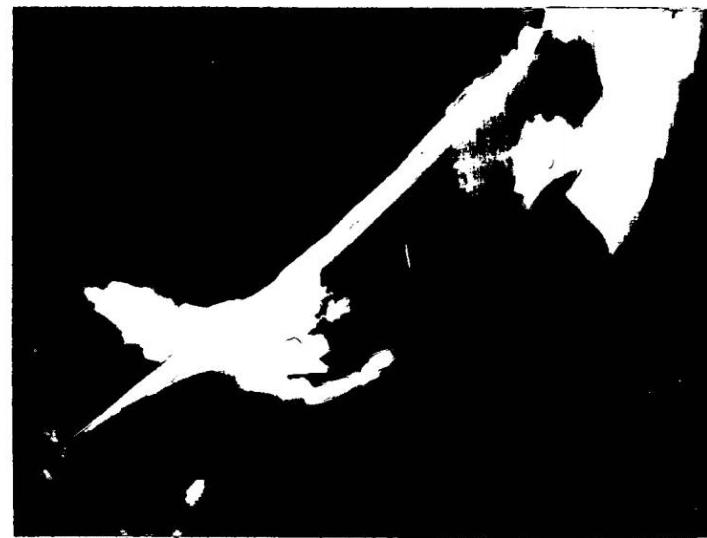
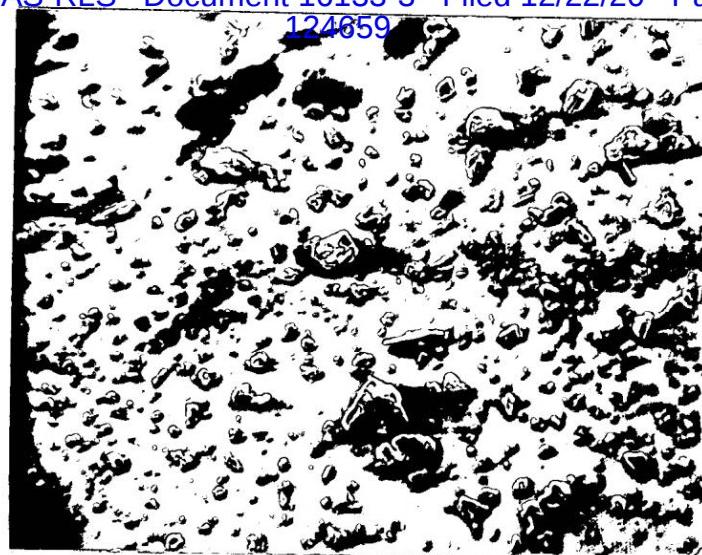
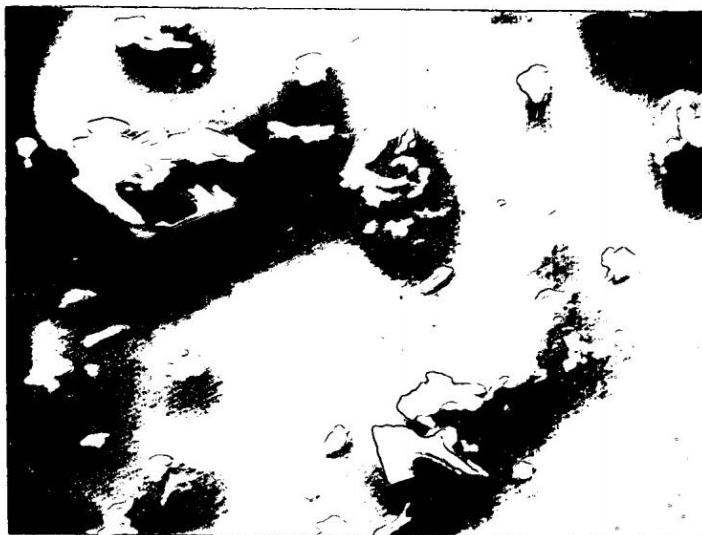


Figure 6. Old stock composite, low Fe tremolite particle, 8000X with spectrum.



150X

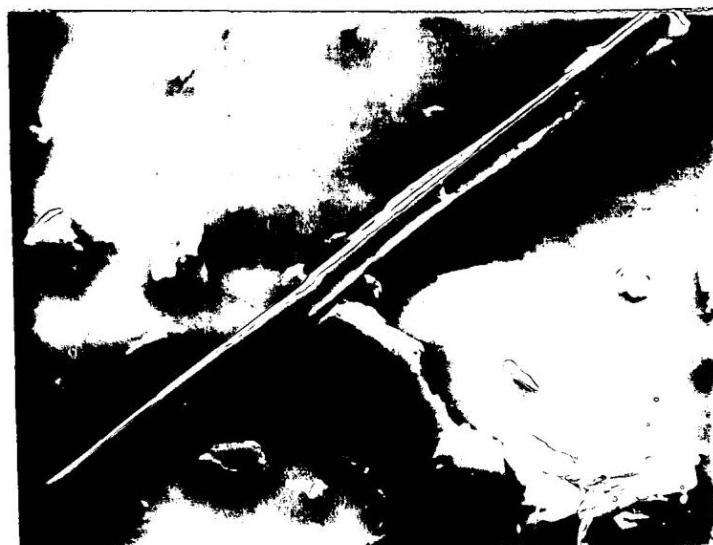


1500X

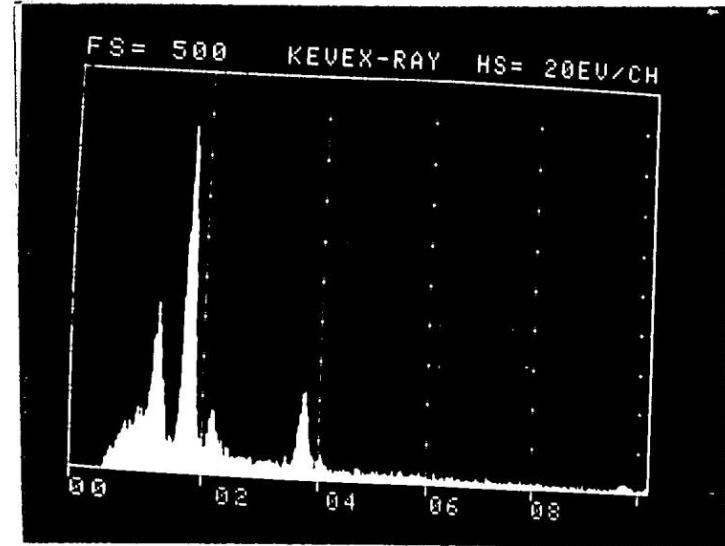


15,000X

Figure 7. Sample 14 and 15 representative micrographs at indicated magnifications. This sample was prepared by new method, but without decantation.



800X



1000X

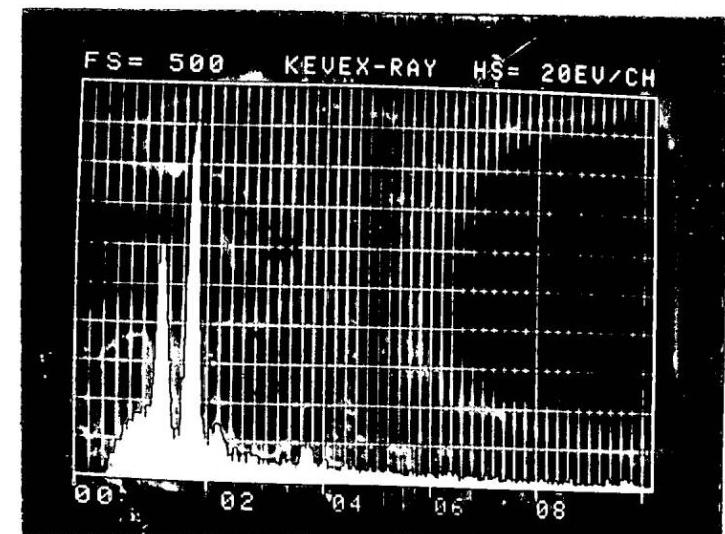
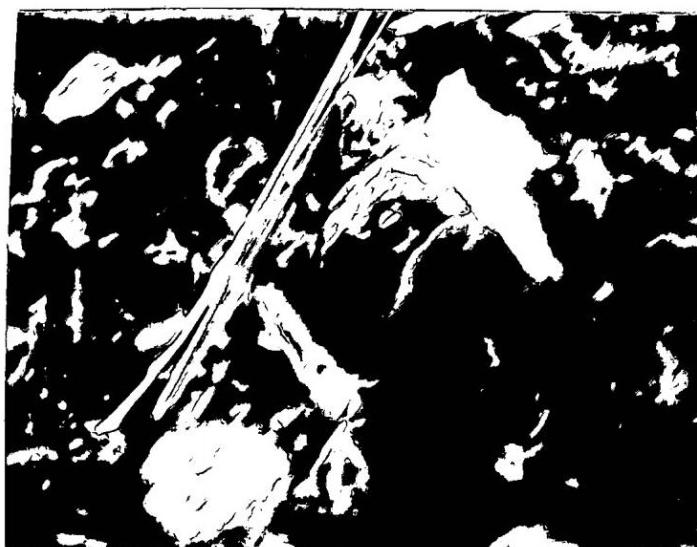
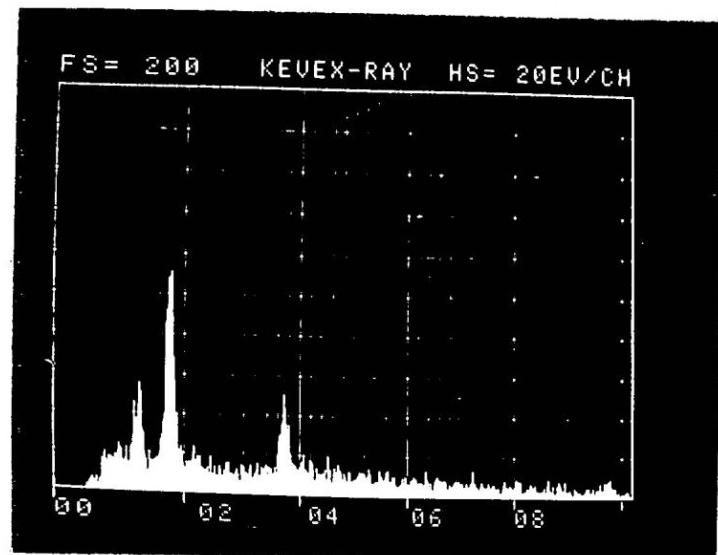


Figure 8. Sample 14 and 15, SEM micrographs with spectra for non fibrous tremolite particles, both 1000X.



800X



1000X

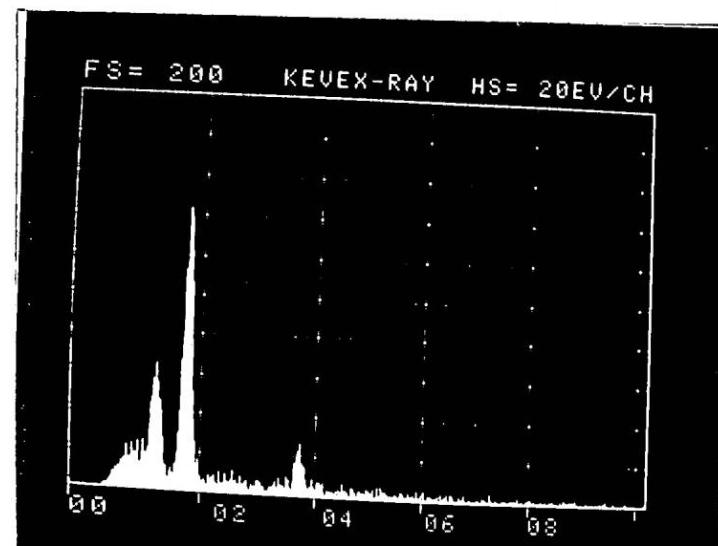


Figure 9. Sample 14 and 15, fibrous tremolite particles with spectra.

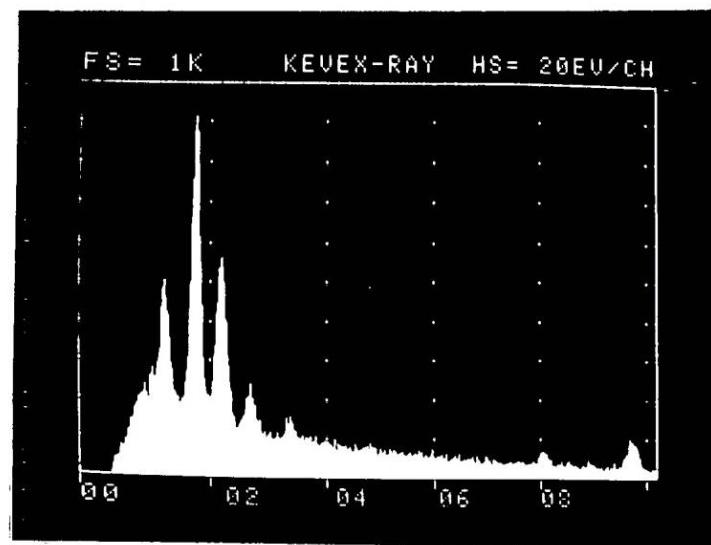
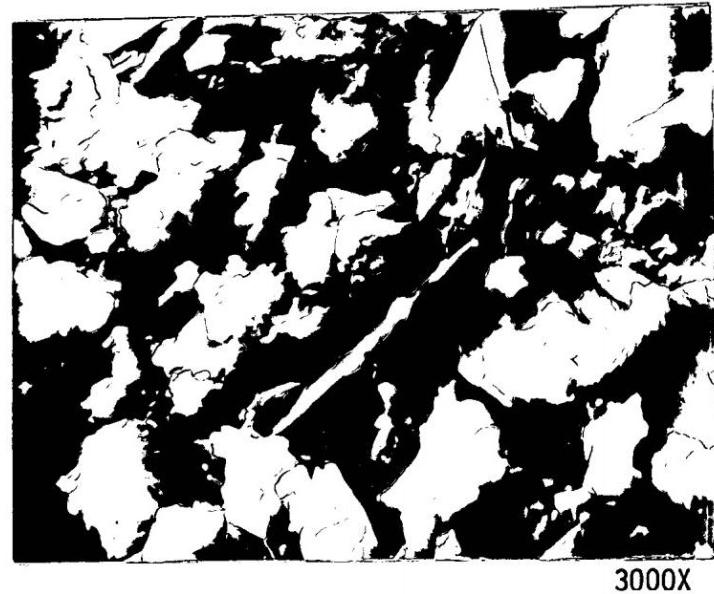
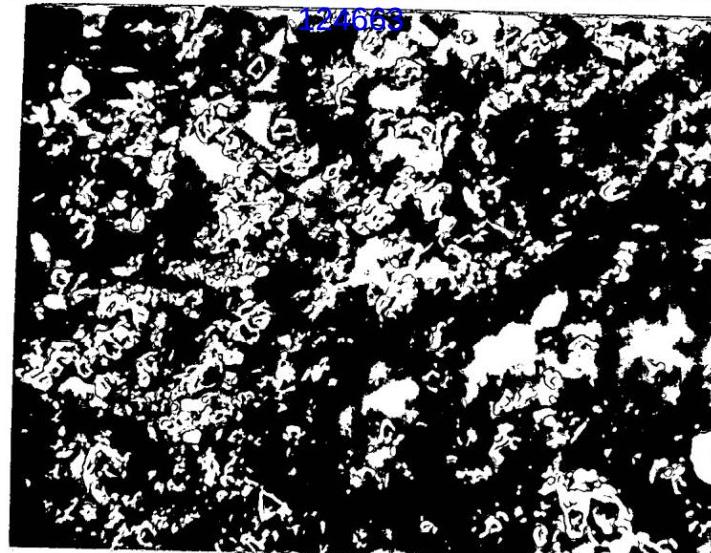


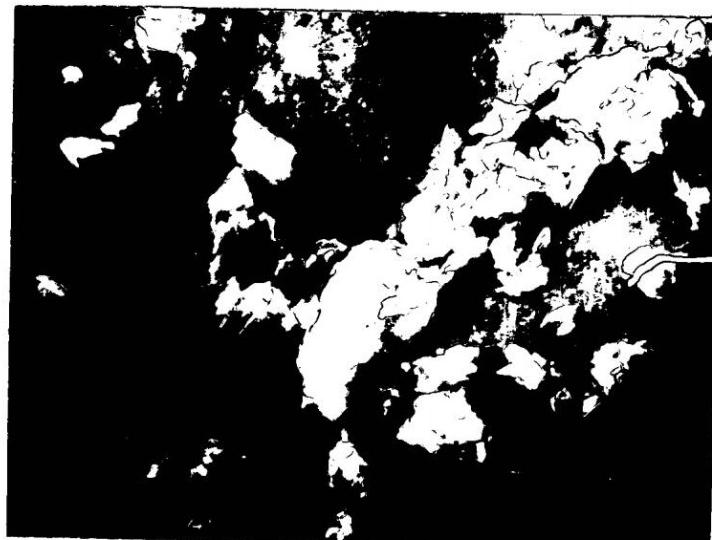
Figure 10. Sample 14 and 15, non-tremolite particle with spectrum.

124668

 EMV
ASSOCIATES



150X



1500X



15,000X

Figure 11. Sample 16, representative micrographs.

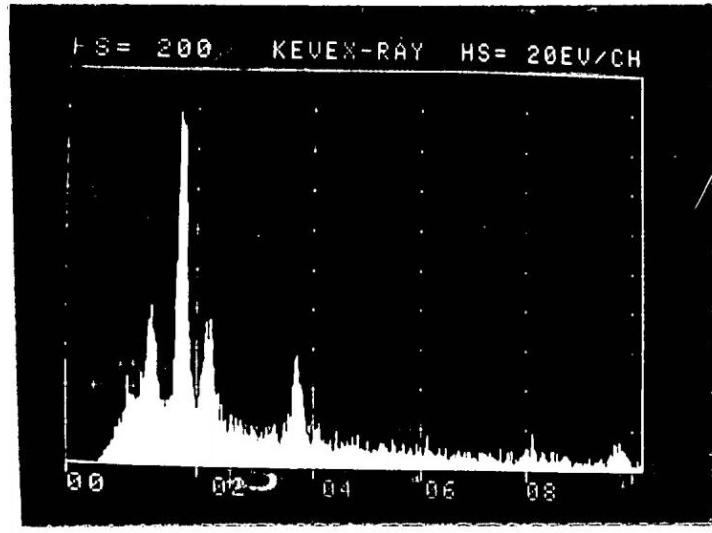
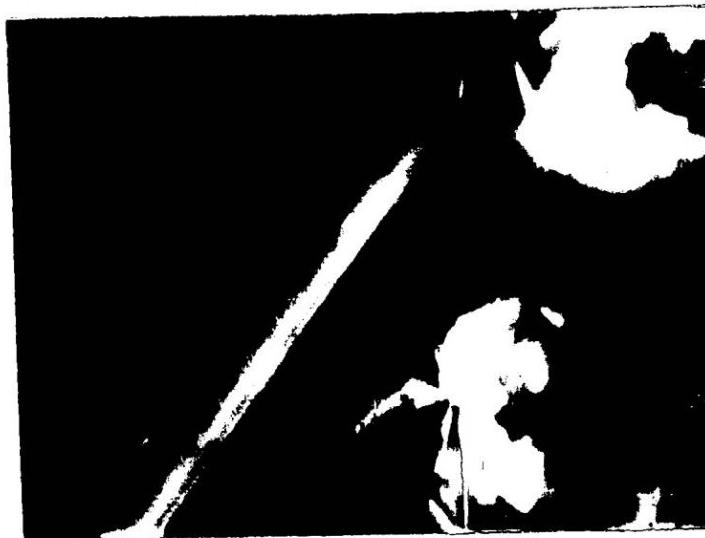
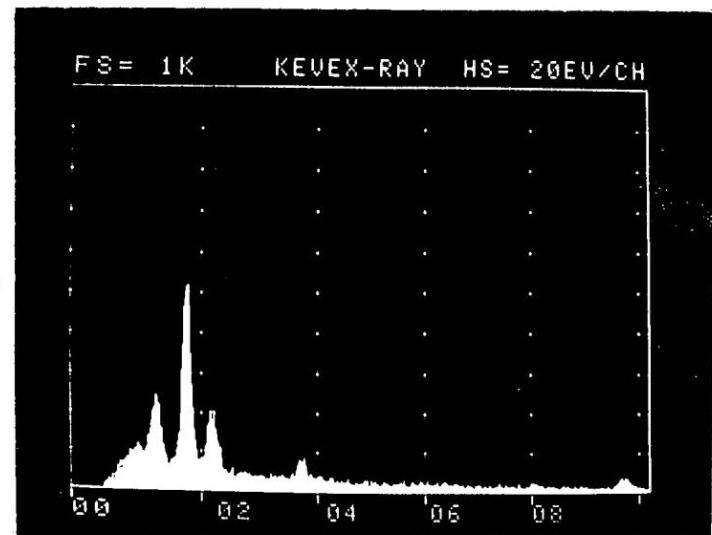
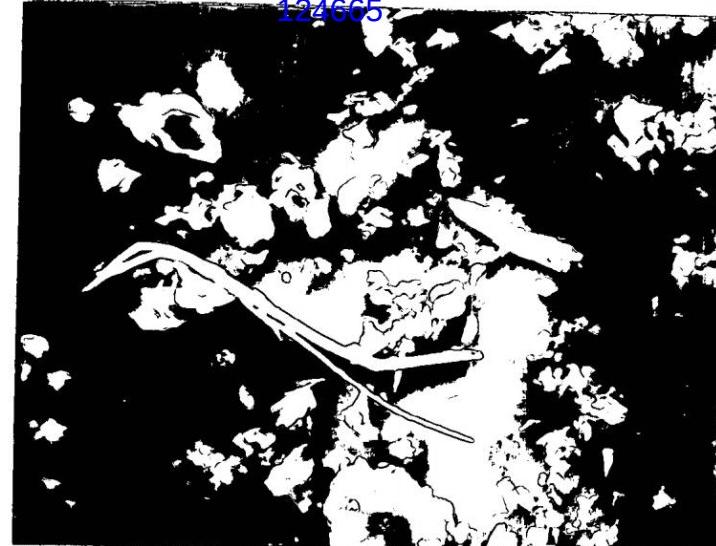


Figure 12. Sample 16, micrograph with spectra for two non-fibrous tremolite particles, both 6000X.



700X



1500X

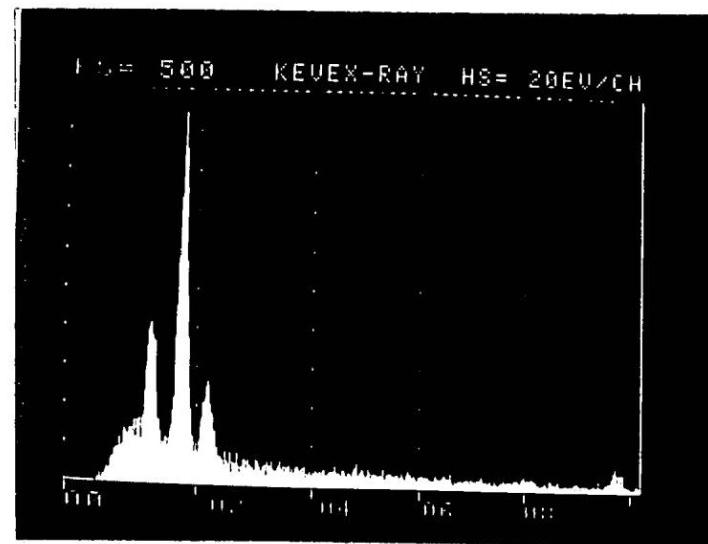
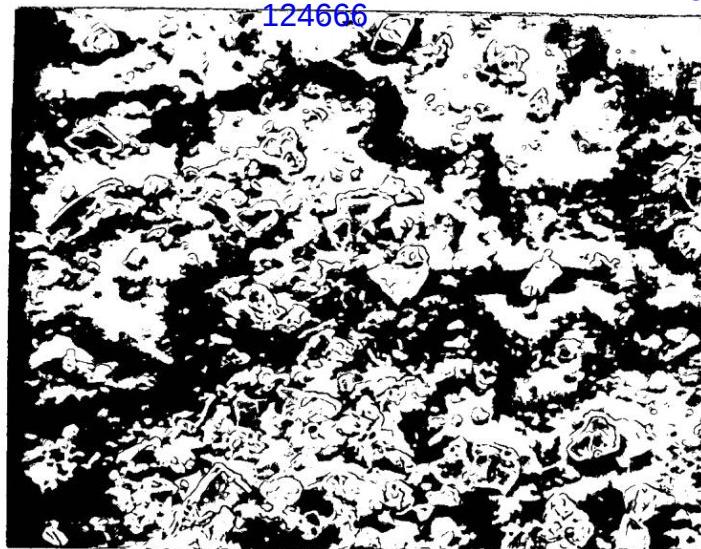


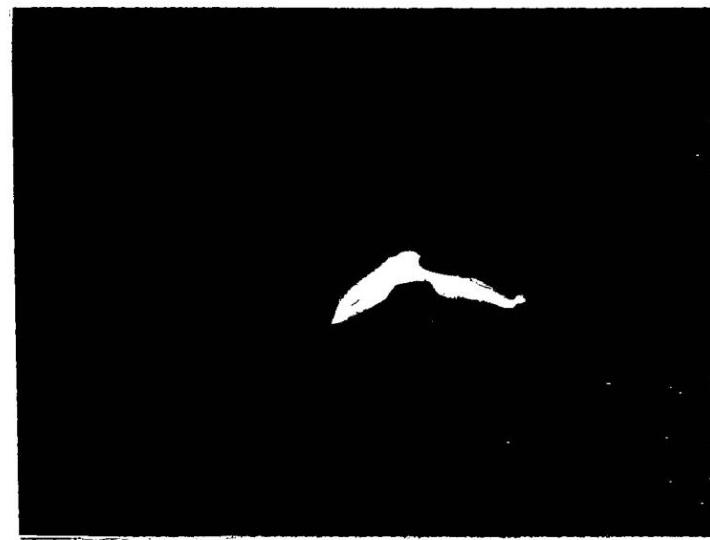
Figure 13. Sample 16, two particles that appear fibrous, but do not resemble anthophyllite and exhibit talc spectrum.



150X



1500X

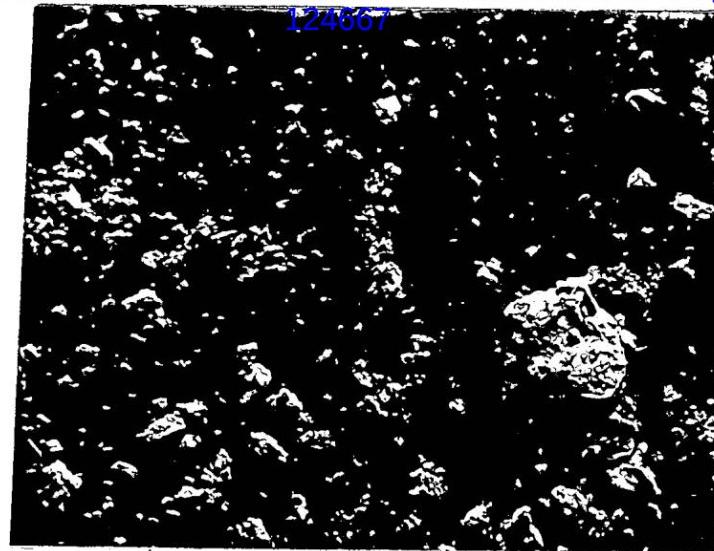


15,000X

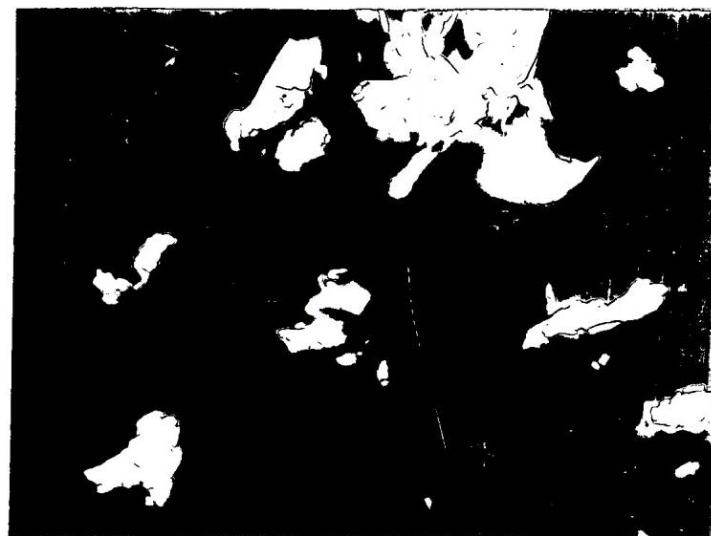
Figure 14. Sample 17 and 18, representative micrographs.

124667

EMV
ASSOCIATES



150X

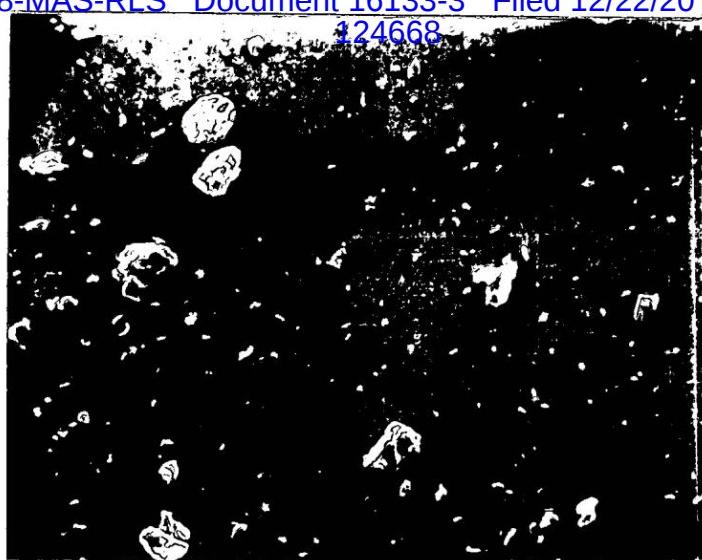


1500X

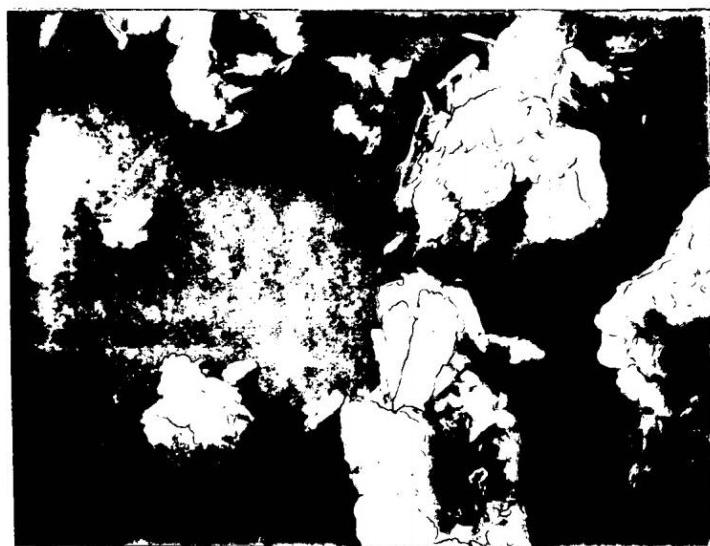


15,000X

Figure 15. Sample 19 and 20, representative micrographs.



150X



1500X



15,000X

Figure 16. Sample 2I and 2III, representative micrographs.

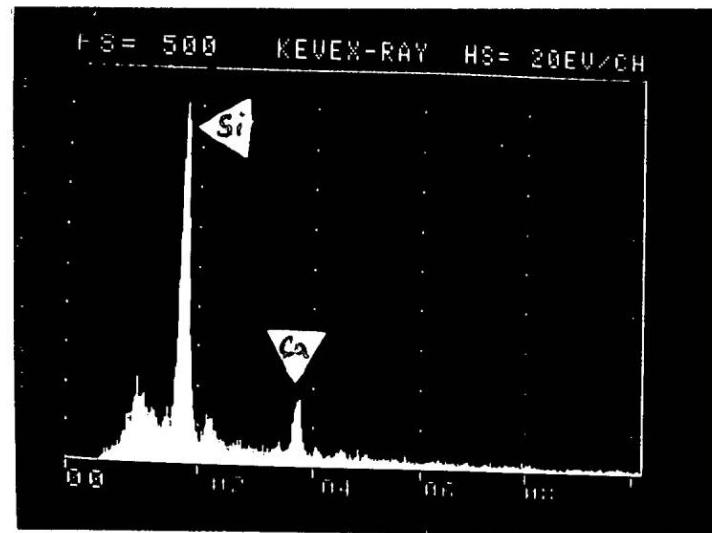
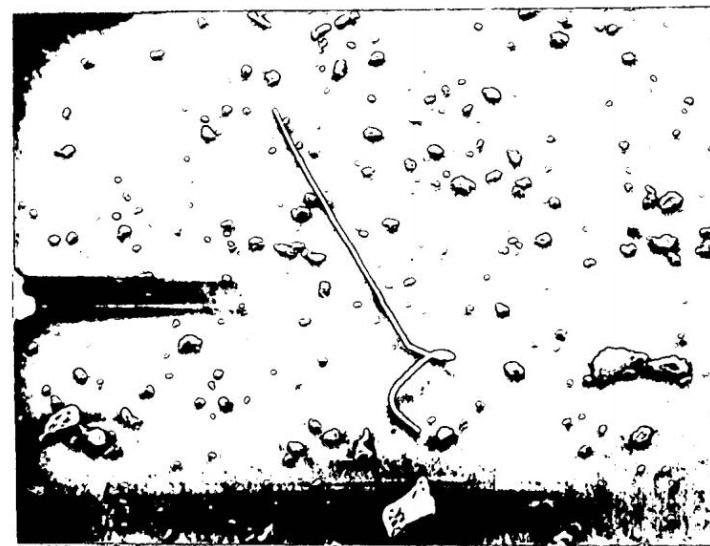
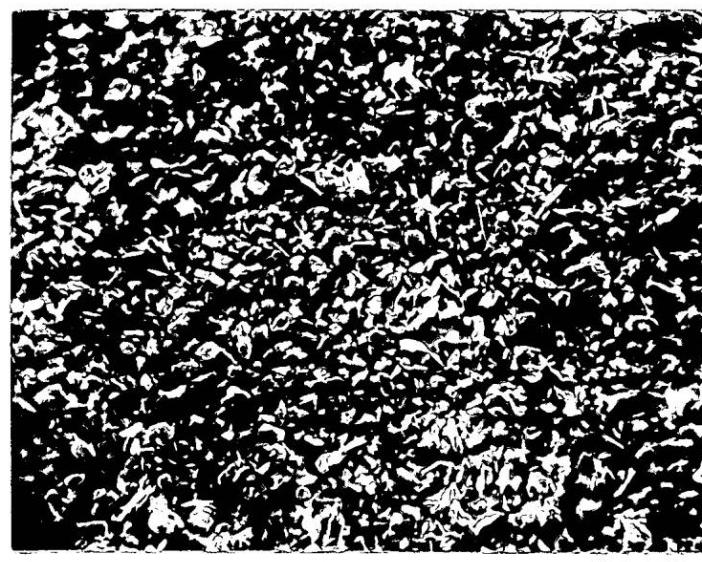


Figure 17. Sample 21 and 21II, micrograph and spectrum of particle suspected to be fiber glass, 150X.



150X



1500X

Figure 18. Sample B composite, representative micrograph,
usual preparation.



150X



500X

Figure 19. Sample B composite, representative micrographs,
sample preparation by new technique.

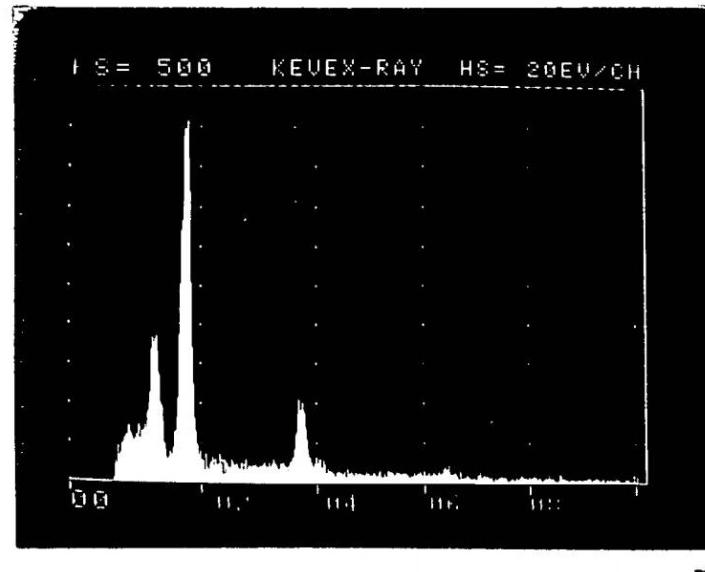


Figure 20. Sample B composite, 2000X micrograph with spectrum showing non-fibrous tremolite detected.

Exhibit 53

File



walter c. mccrone associates, inc.

CONSULTING: ULTRAMICROANALYSIS • MICROSCOPY • SMALL PARTICLE PROBLEMS • SOLID-STATE CHEMISTRY

5 October 1978

Mr. Roger Miller
Windsor Minerals, Inc.
P. O. Box 680
Windsor, Vermont 05089

Dear Mr. Miller:

We have analyzed 38 talc samples for asbestos minerals. In two cases we found one small chrysotile fiber of approximately 0.5 µm in length. Both of these fibers could very easily be contamination from outside sources such as air or water. The level is considerably below background levels detected due to the presence of asbestos in ambient air reported in the literature. In particular, it is about 1/20 of the level regarded as "statistically significant" in the EPA interim procedure for asbestos in water.

The two samples with the single fibrils were:

1. Mc-Ja
2. CI-Ia 2/13 to 2/27/78

The remainder of the talc appeared, in general, to be excellent in quality with no evidence of asbestos fibers.

Thank you for consulting McCrone Associates. If you should have any further questions regarding this report, or the data contained herein, please feel free to contact us.

Sincerely,

Gene R. Grieger
Senior Research Physicist

Ian M. Stewart
Manager, Electron Optics Group

GRG/IMS:fe
ref: 4055
attach.

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J&J-0034492

Exhibit 54

JNJ000063167

Metadata

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PgCount	1	ORIGINAL
Text Path	TEXT\TEXT000045\019701532.txt	ORIGINAL
Trial_Ex_Number	Pltf_JNJ_00006368	ORIGINAL

Fri Feb 9 - PM
¹⁹⁷⁹

Received call from

Harold Cohen - BPC Quality Control

DOC Central Analytical Research found massive amphiboles in the 66 composite sample of Nov 6-10. The sample was forwarded to George Lee's group where the presence of amphiboles was confirmed. They were identified as tremolite and actinolite.

Less than 1% of 1% was found and the sample confirms to standard. None were found in preceding sample or samples up to Jan 3rd, 1979.

Concerned that it may be indicative of a coming problem.

I discussed the fact that we also processed our industrial talcs in the same lab.

I asked them to examine another composite of the sample material. They agreed to this and a new composite was sent the same day.

J&J-0013502

Exhibit 55

JNJ000063236

Metadata

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Trial_Ex_Number	Pltf_JNJ_00006424	ORIGINAL



walter c. mccrone associates, inc.

CONSULTING: ULTRAMICROANALYSIS • MICROSCOPY • SMALL PARTICLE PROBLEMS • SOLID-STATE CHEMISTRY

6 November 1980

Ms. Helen J. Grayson
Windsor Minerals Company
P. O. Box 680
Windsor, Vermont 05089

Dear Ms. Grayson:

I have completed my asbestos analysis of a talc sample labeled W. Gregg KR submitted with your letter and purchase order #R-4345 of September 29, 1980.

The sample was examined with the transmission electron microscope. Selected area electron diffraction was used to identify the mineral fibers present. Chrysotile asbestos was found in the sample at a level of less than 0.5%. Several fibers were found so it probably is not a contaminant of the sample.

Thank you for consulting McCrone Associates. Please contact me if you have any questions.

Sincerely,

Richard M. Ellis, Jr.
Research Microscopist

RME:gb
Ref: 4055

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J&J-0044027

Exhibit 56



mcCrone environmental services, inc.
200 OAKBROOK BUSINESS CENTER
5500 OAKBROOK PARKWAY
NORCROSS, GA 30093 • 404-449-8461

22 August 1985

Windsor Minerals, Inc.
P.O. Box 680
Windsor, Vermont 05089

Attention: Mr. Arthur J. LaPierre,
Safety, Health and Training Director

SUBJECT: Analysis of Seven Talc Samples for
Asbestos Mineral Content by
Transmission Electron Microscopy

Re: McCrone Project No. ME-1862

Dear Mr. LaPierre:

McCrone Environmental Services, Inc. of Norcross, Georgia, has completed the analyses of the seven talc samples that we received from your office on 25 July, 1985. The samples were labelled as follows:

WMI 85-25 (1) *

WMI 85-26 (2)

WMI 85-27 (3)

WMI 85-28 (4)

WMI 85-29 (5)

WMI 85-30 (6)

WMI 85-31 (7)

* McCrone TEM Lab Number

The samples were prepared following our usual technique for TEM bulk sample analysis. Small (about 10 mg.) representative portions of each sample were weighed and suspended in 10 ml. of nanopure water and ultrasonicated for 5 minutes. Drops (6.5 microliters) of the suspended samples were placed on electron

a subsidiary of Walter C. McCrone Associates, Inc.

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J&J-0034630

microscope grids and allowed to dry. The prepared sample grids were analyzed at 20,000x magnification. Ten grid squares per sample were analyzed. The presence of asbestos minerals was verified by selected area electron diffraction (SAED), energy dispersive X-ray analysis (EDX) and by morphology.

Chrysotile asbestos was detected only in the samples labelled WMI 85-28 and WMI 85-30. Because only a few fibers were detected in the portion of each sample analyzed, no accurate value of the weight percent of chrysotile asbestos could be calculated with statistical certainty. The data obtained from each sample analysis suggest that the amount of chrysotile asbestos in the samples labelled WMI 85-28 and WMI 85-30 is less than 0.0001 percent by weight.

Thank you for consulting McCrone Environmental Services, Inc. If you have any questions concerning these results, please contact our office.

Sincerely,

Thomas J. Gore III
Thomas J. Gore III
Laboratory Microscopist
James R. Millette
James R. Millette, Ph.D.
Manager, Electron Optics Group

TJC/JRM/arwp

cc: ✓ Windsor Minerals, Inc.
Windsor VT
1) Mr. Arthur J. LaPierre,
Safety, Health and Training Director
Windsor Minerals, Inc.
Windsor VT

mccrone environmental services, inc.

J&J-0034631

Exhibit 57



mcCrone environmental services, inc.
200 OAKBROOK BUSINESS CENTER
5500 OAKBROOK PARKWAY
NORCROSS, GA 30093 • 404-449-8461

29 April 1986

Windsor Minerals, Inc.
P. O. Box 688
Windsor, Vermont 05089

Attention: Mr. Roger N. Miller, President

Re: McCrone Project No. ME-2275

Dear Mr. Miller:

Under your Purchase Order WS-0503 we received three (3) talc samples for asbestos analysis. The samples were identified as WMI85-53, WMI85-55, and WMI85-57. Examinations by transmission electron microscopy resulted in the detection of trace amounts of chrysotile asbestos in the samples. The results are tabulated below.

Sample No.	Amount Chrysotile Detected Wt. %
WMI85-53	0.0003
WMI85-55	0.0015
WMI85-57	0.0055

If there are any questions regarding these results, please do not hesitate to contact our office.

Sincerely,

Thomas Kremer
Thomas Kremer
Electron Microscopist
James R. Millette
James R. Millette, Ph.D.
Manager, Laboratory Services

TK/JRM/mts

cc: 1) Windsor Minerals, Inc.
Windsor VT
✓ Mr. Roger N. Miller, President

a subsidiary of **walter C. McCrone associates, inc.**

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J&J-0044934

JNJ 000063285

Exhibit 58

MAR 25 1992

INTEROFFICE CORRESPONDENCE
LOS ANGELES

TO	SEE DISTRIBUTION	DATE	March 25, 1992
ATTENTION		L.A. FILE	
FROM	R. C. MUNRO	YOUR FILE	
SUBJECT		COPIES TO	

CYPRUS ORE RESERVES - ARSENIC & TREMOLITE

Excerpts from Cyprus Talc Reserve Report by R.C. Munro

Geology & Environment

There are some important environmental issues related to the geology and mineralogy of the Cyprus talc deposits, particularly in Vermont.

Arsenic

Arsenic iron sulphides (arsenopyrite) are, with their alteration products, present in many of the talc-carbonate schist ore zones in the Vermont area. Total arsenic, as analyzed in the Ludlow Rainbow deposit, averages generally less than 100 ppm but with some small zones in excess of 1000 ppm. No apparent major effort is underway to regularly monitor or completely assess the total arsenic content of ores, tailing solids and wastes although the distribution of sulphides and arsenates in the talc ore system is generally understood.

In near surface weathering zones, crushed rock, stock piles and mine working areas, the arsenic sulphides (above) convert in part to the more soluble arsenates, for example, the hydrous nickel arsenate, annabergite (38% AS₂O₅). Soluble arsenic is measured in cores, ore samples, mill feed, product and tailings. Soluble arsenic content is monitored and governed under EPA/OSHA regulations.

High (e.g. + 6 ppm As) soluble arsenic contents of mill feed at the West Windsor mill contribute to reduced recoveries and milling rates. At West Windsor, part of the mill recovery problem at least is being ascribed to a high fines content in the feed and to low pH of the process water, both of which contribute to increased soluble As. The problem has been under study at West Windsor since 1987 by Mill Manager, Jeff Scott, who indicated that if the arsenic content is above + 6 ppm soluble As and the talc content falls below 62% talc production rates and recoveries can fall by 50%. The product specs are -3 ppm As or less at West Windsor and current material in the silos is measured at 0.73 ppm to 2.33 ppm soluble As.

To me, there also seems to be the overall risk of continuing conversion of As in sulphide to more soluble arsenates in some stockpiles, waste, and solid tailings as acid, water, air and time work on them.

Tremolite

The other serious mineralogical contaminant in the talc ores of Vermont is the fibrous variety of the amphibole minerals, tremolite and actinolite (hydrous calcium iron-magnesium silicates) which have been classified as asbestosiform minerals by OSHA and EPA. OSHA was expected to de-classify non-fibrous (blocky) tremolite on February 29, but has not as yet announced their decision.

As a result, all tremolite, the fibrous varieties of all amphiboles and chrysotile asbestos in talc ores are a source of great concern to all talc producers and especially to marketers of cosmetic products.

Cyprus claims that there are no fibres in their cosmetic talc products and they work rigorously to ensure this. However, a recent paper published by Rutgers University worker, Alice Blount, suggests the presence of fibre in several cosmetic talcs, some of which might have been from Cyprus West Windsor material, which is a source of great concern to Cyprus management and potentially to their principal customer, Johnson & Johnson. Talc de Luzenac personnel are well aware of the situation and Phillippe Moreau is currently quietly working to identify the reality and the magnitude of the problem.

Vermont talcs are derived from altered serpentine - a natural host for asbestosiform minerals. There is certainly visible tremolite and actinolite in specific zones of the Vermont deposits - fibrous tremolite was identified by the writer in exposures and cores at the East Argonaut and Black Bear mines. Cyprus staff report past tremolite from the Hammondsburg and Clifton deposits.

Tremolite in these deposits is encountered in the contact zones between the talc and the surrounding schist; in "grey talcs" in the vicinity of the contacts; and associated with the chlorite/amphibole waste zones within the talc ores that are locally termed "cinders". Cyprus maintains a selective mining program in Vermont that is directed toward exclusion of all of these potentially fibre-bearing zones from the ores sent to the mills, and those suspect tonnages, including the associated talc, are left in the pit walls or sent to waste piles.

Minor occurrences of amphiboles and asbestosiform minerals are also attributed to confined areas of the Montana deposits. Tremolite (blocky) was encountered in a dike zone at Antler. A chlorite zone at intersecting faults at Yellowstone S40 contained some minor tremolite, and stockpiles of Beaverhead open pit fines, slated

for burial, have been measured at 0.33% to 0.70% tremolite by Three Forks and Alpine Mill Labs.

No fibrous material showed up in samples taken by the writer at the Western Source Red Hill mine in California, but minor tremolite is possibly present in the contact zone where it should be avoidable by selective mining.

Arsenic content (total and soluble) and the presence of fibrous minerals in exposed stockpiles and waste need to be checked at Alpine, Alabama and the now closed California properties operated by Cyprus in the past.

Rem

/eji

DISTRIBUTION:

R. J. Kerstetter
G. L. Toll
G. B. Lawson - BCL
J. Paulsen
P. Moreau - Talc de Luzenac

IMERYS219720

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Confidentiality	No	ORIGINAL
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Redacted	No	ORIGINAL

Exhibit 59

LUZENAC AMERICA INCORPORATED

WEST WINDSOR LABORATORY

SAMPLE TO BAIN ENVIRONMENTAL , INC.
DECEMBER 4, 1997

FLOAT FEED OCT 1997 LAI 97 - 10

FLOAT FEED NOV 1997 LAI 97 - 11

*F. test was requested
and performed on LAI 97-10
regarding Jan. report*

pc: MARTY HAYES

NOTE: This information is for LUZENAC AMERICA ONLY.

J&J-0037391

Bain Environmental, Inc.

TABLE I

Summary of Transmission Electron Microscopy (TEM) Results

Project No. BE-971208244

Client Information: Luzenac America, Windsor, VT		Date Analyzed/Analyst: 13 Dec. 1997/jrr	
Sample Identification	Amount of Material Analyzed (ng)	Asbestos Minerals Detected (Weight %)	Detection Limit (Weight %)
LAI 97-10	151	< 0.0004*	0.0004
LAI 97-11	148	N/D	0.0004

* Two chrysotile fibers were detected < 10.0 μm in length.
ng = nanograms
N/D = None Detected
Detection limit is based on the mass of 5 chrysotile fibers.

900 Ogden Ave., Suite 310, Downers Grove, Illinois 60515 Phone: 630/769-0400 Fax: 630/769-0422

J&J-0037392

Bain Environmental, Inc.

14 December 1997

Mr. Marty Hayes
Luzenac America, Inc.
West Windsor Laboratory
P.O. Box 680
Windsor, VT 05089

Subject: TEM Analysis of LAI 97-10 and LAI 97-11
for Asbestos Minerals

Re: Bain Project No.: BE-971208244

Dear Mr. Hayes:

We have completed the transmission electron microscopy (TEM) analysis of two talc samples labeled "LAI 97-10" and "LAI 97-11" for asbestos mineral content. We received the samples on 8 December 1997 in good condition. The work was completed under your purchase order number QC39934W.

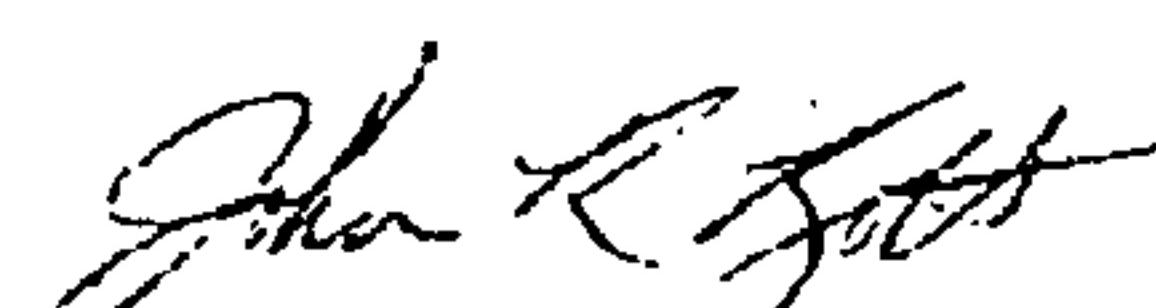
The analysis was completed according to our standard operating procedure, *A Standard TEM Procedure for Identification and Quantitation of Asbestiform Minerals in Talc* (Kremer, 1990). According to the methodology, chrysotile and amphibole asbestos mineral identifications are made using morphology, selected area electron diffraction (SAED) and energy-dispersive x-ray spectroscopy (EDS) analyses. Examination was conducted using a JEOL 1200 TEM, operating at 120KV and magnifications up to 20,000 X.

Two chrysotile fibers, one approximately 8 micrometers (μm) long and the second, approximately 5 μm long, were observed in LAI 97-10. The two fibers are recorded as one occurrence since they were very near to each other but were not touching. Since five fibers are determined to be the detection limit for the method, the chrysotile content is considered within the background level. We detected no asbestiform minerals in the LAI 97-11. A summary of the results are provided in Table I.

As we do not have the facilities to store the samples indefinitely; if you would like to have them returned, please notify us within 30 days. Otherwise, after 30 days, the samples will be discarded.

Thank you for consulting Bain Environmental, Inc. If you have any questions regarding the analysis, please contact our office at (630) 769-0400.

Sincerely,



John R. Roth
Electron Microscopist

JRR:jrt
Enclosure
Ref: BE-971208244, P.O. No.: QC39934W

900 Ogden Ave., Suite 310, Downers Grove, Illinois 60515 Phone: 630/769-0400 Fax: 630/769-0422

J&J-0037393

Exhibit 60



Luzenac America Technical Center • 8985 East Nichols Avenue • Englewood, CO 80112 • (303) 643-0451 • Fax: (303) 799-8926

TECHNICAL REPORT

To: **David Crouse** Analytical Project No: **A01709**
From: **Julie Pier** Date: **23-May-02**
Analytical and Technical Support

Copy: **J. M. Godla**
S. S. Mauney
R. J. Zazenski

Subject: **ANALYSIS OF FIBROUS MATERIAL FROM ARGONAUT**
WASTE ROCK

Request:

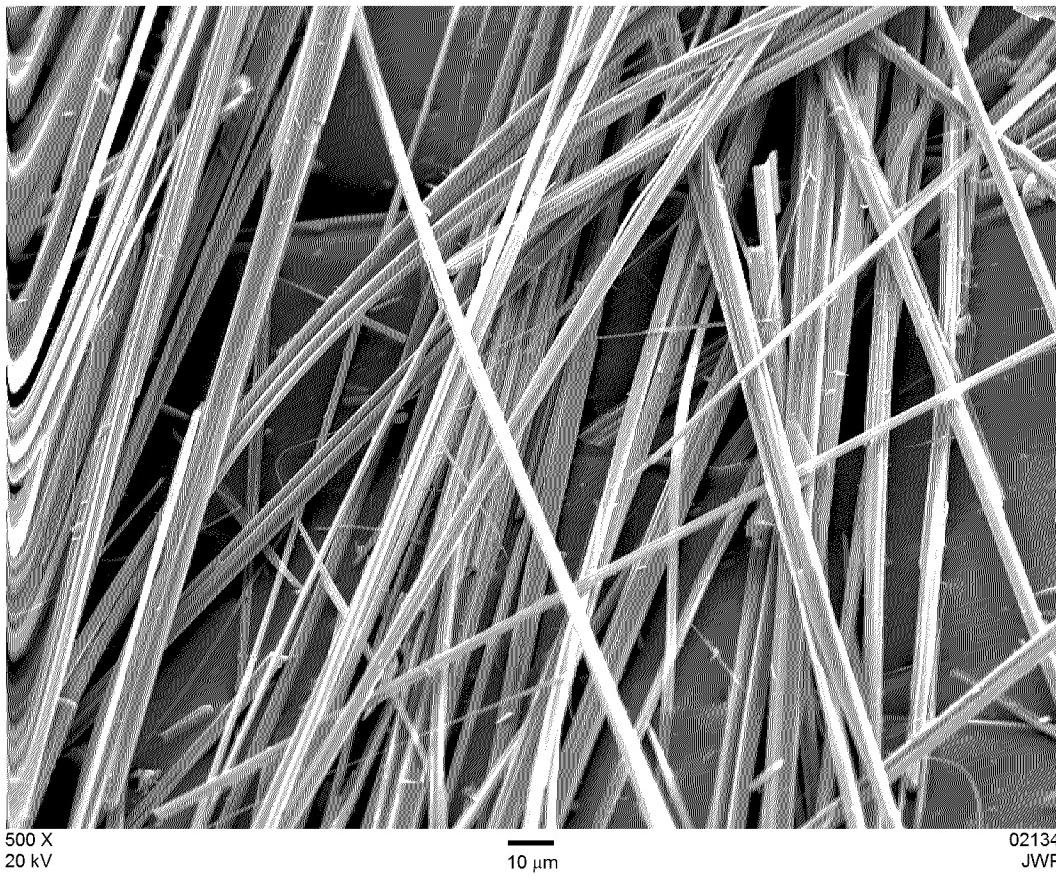
A sample of fibrous material from the waste rock on the west side of the south end of the Argonaut mine was submitted to the Technical Center for identification. The waste rock was being considered for road paving applications.

Results:

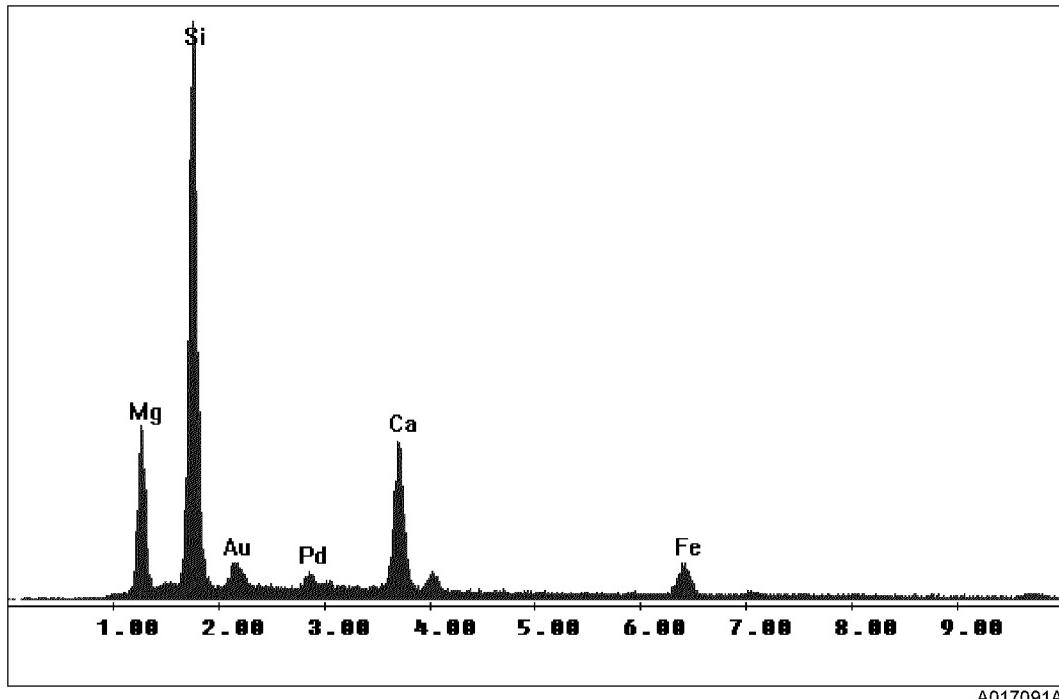
The fibrous material is tremolite.

The material was first examined by polarizing light microscopy, using the dispersion staining technique. Tremolite was preliminarily identified by this method.

Subsequent analysis by scanning electron microscopy (SEM) and transmission electron microscopy (TEM) confirmed the tremolite identification. SEM micrographs and chemical analysis by energy dispersive X-ray spectroscopy (EDS) are included in Plate 1.

**SEM IMAGE**

Fibrous material found in Argonaut waste rock identified as tremolite. The material clearly has an extremely high aspect ratio.

**EDS CHEMICAL ANALYSIS**

The chemical analysis of the material, above, is consistent with tremolite.

Au and Pd peaks are from a conductive coating applied for SEM analysis.

Exhibit 61



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CONFIDENTIAL

PRODUCT CERTIFICATION REPORT

Date: February 26, 2004
Attention: Randy Corder
Johnson and Johnson Consumer Products Incorporated
P.O. Box 587
Royston, GA 30662

Reported by: Julie Pier

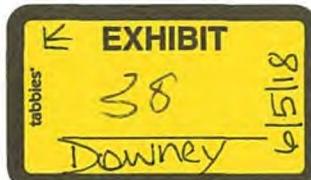
Copy: G.E Gauntt, D. Harris, bM.J. Lorang, R.J. Zazenski
Reference: A03098, A03372, A03499

The following analysis was completed by Luzenac America, Inc. according to ASTM method D 5756-02, replacing Johnson & Johnson Test No. TM7024 ("Analysis of powdered talc for asbestos minerals by transmission electron microscopy," REV: 08/21/95).

SUMMARY REPORT - 2003

Product	Dates Milled	Analytical Project No.	Total Talc Weight Examined (nanograms)	Total Asbestos (weight %)	Calculated Detection Limit* (Weight %)
Grade 96 USP Composite-1 st Quarter	Jan 6 – 10, 2003 Jan 23 – 29, 2003 February 24 – March 12, 2003 March 15 – 19, 2003	A03098	72.8	<0.0008	0.0008
Grade 96 USP Composite-2 nd Quarter	April 7 – 10, 2003 May 13 – 16, 2003 June 3 – 10, 2003 June 23 – 27, 2003	A03372	73.6	0.000006	0.0008
Grade 96 USP Composite-3 rd Quarter	June 30 – July 3, 2003 August 3 – 6, 2003 August 11 – 14, 2003 September 9 – 12, 2003 September 28 – October 2, 2003	A03499	46.2	0.00002	0.0012

* = Based on the detection of five fibers



IMERYS077643

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Trial_Ex_Number	Pltf_IMERYS_00021146	ORIGINAL

Exhibit 62



Luzenac • 345 Inverness Drive South • Suite 310 • Centennial, CO 80112 • (303) 643-0451 • Fax: (303) 643-0446

CONFIDENTIAL

PRODUCT CERTIFICATION REPORT

Date: February 27, 2004
Attention: Randy Corder
Johnson and Johnson Consumer Products Incorporated
P.O. Box 587
Royston, GA 30662

Reported by: Julie Pier

Copy: G.E Gauntt, D. Harris, M.J. Lorang, R.J. Zazenski
Reference: A02224, A02400, A02524, A03038

The following analysis was completed by Luzenac America, Inc. according to ASTM method D 5756-02, replacing Johnson & Johnson Test No. TM7024 ("Analysis of powdered talc for asbestos minerals by transmission electron microscopy," REV: 08/21/95).

SUMMARY REPORT - 2002

Product	Dates Milled	Analytical Project No.	Total Talc Weight Examined (nanograms)	Total Asbestos (weight %)	Calculated Detection Limit* (Weight %)
Grade 96 USP Composite-1 st Quarter	March 5 – 8, 2002 March 20 – 26, 2002	A02224	71.8	0.000003	0.0008
Grade 96 USP Composite-2 nd Quarter	April 15 – 21, 2002 May 1 – 4, 2002 May 14 – 19, 2002 May 21 – 25, 2002 June 13 – 16, 2002 July 9 – 12, 2002	A02400	68.9	<0.0009	0.0009
Grade 96 USP Composite-3 rd Quarter	August 3 – 9, 2002 August 9 – 12, 2002 September 16 – 19, 2002 October 7 – 11, 2002	A02524	74.7	<0.0008	0.0008
Grade 96 USP Composite-4 th Quarter	October 29 – November 1, 2002 December 3 – 6, 2002	A03038	71.1	0.00003	0.0008

* = Based on the detection of five fibers

IMERYS342782

Metadata

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ProdVol	IMERYS018;	ORIGINAL

Exhibit 63

**SUMMARY OF TEM ASBESTOS RESULTS:
GRADE 66/96 USP PRODUCT COMPOSITES**

11-Mar-04

Confidential

Table 1. Summary of results

Sample Description	Sample No.	TEM Analysis						PLM Analysis (+200 Mesh)	
		>5 µm	<5 µm	Amphibole Content (ppm)	>5 µm	<5 µm	Chrysotile Content (ppm)	Structure (S) Concentration S (x 10 ⁶)/g	Amphibole Asbestos %
Grade 66 composite: 2 nd Quarter, 2001	A01314-1	0	0	ND	0	0	ND	<85	NA NA
Grade 66 composite: 3 rd Quarter, 2001	A01571-1	0	0	ND	0	0	ND	<86	NA NA
Grade 66 composite: 4 rd Quarter, 2001	A02008-1	0	0	ND	0	0	ND	<87	NA NA
Grade 96 composite: 1 st Quarter, 2002	A02224-1	0	0	ND	0	1	NS	<132	NA NA
Grade 96 composite: 2 nd Quarter, 2002	A02400-1	0	0	ND	0	0	ND	<87	NA NA
Grade 96 composite: 3 rd Quarter, 2002	A02524-1	0	0	ND	0	0	ND	<80	NA NA
Grade 96 composite: 4 th Quarter, 2002	A03038-1	0	0	ND	0	1	NS	<133	NA NA
Grade 96 composite: 1 st Quarter, 2003	A03098-1	0	0	ND	0	0	ND	<82	NA NA
Grade 96 composite: 2 nd Quarter, 2003	A03372-1	0	0	ND	0	1	NS	<129	NA NA
Grade 96 composite: 3 rd Quarter, 2003	A03499-1	0	0	ND	0	1	NS	<205	NA NA

ND = Not detected (see report text).

NS = Not significant (see report text).

NA = Not analyzed (insufficient sample).

PLAINTIFF'S
EXHIBIT
JNJ-1538

**SUMMARY OF TEM ASBESTOS RESULTS:
GRADE 66/96 USP PRODUCT COMPOSITES**

11-Mar-04

Confidential

Sample Description.	Sample No.	Starting Weight (g)	Aliquot Filtered (mL)	Grid Spaces (#)	Sample Analyzed (ng)	TEM Amphibole Sensitivity* ppm	TEM Chrysotile Sensitivity* ppm
Grade 66 composite: 2 nd Quarter, 2001	A01314-1	0.0367	0.5	20	35	NA	0.02
Grade 66 composite: 3 rd Quarter, 2001	A01571-1	0.0363	1.0	10	35	NA	0.02
Grade 66 composite: 4 th Quarter, 2001	A02008-1	0.0355	1.0	10	34	NA	0.02
Grade 96 composite: 1 st Quarter, 2002	A02224-1	0.0373	1.0	10	36	NA	0.02
Grade 96 composite: 2 nd Quarter, 2002	A02400-1	0.0358	1.0	10	35	NA	0.02
Grade 96 composite: 3 rd Quarter, 2002	A02524-1	0.0388	1.0	10	37	NA	0.02
Grade 96 composite: 4 th Quarter, 2002	A03038-1	0.0369	1.0	10	36	NA	0.02
Grade 96 composite: 1 st Quarter, 2003	A03098-1	0.0378	1.0	10	36	NA	0.02
Grade 96 composite: 2 nd Quarter, 2003	A03372-1	0.0382	1.0	10	37	NA	0.02
Grade 96 composite: 3 rd Quarter, 2003	A03499-1	0.0240	1.0	10	23	NA	0.03

*The analytical sensitivity for this method is defined as 1 fiber (ASTM D 5756-00).

IMERYS342778

Metadata

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OtherCustodians	Non-Custodial;	ORIGINAL
ProdVol	IMERYS018;	ORIGINAL

Exhibit 64

7. Langer
Letter

TF 0039



MOUNT SINAI SCHOOL OF MEDICINE
of The City University of New York
FIFTH AVENUE AND 100TH STREET • NEW YORK, N.Y. 10029



Department of Community Medicine

November 10, 1971

Dr. Gavin Hildick-Smith
Director of Clinical Research
Johnson and Johnson
Research Division
New Brunswick, New Jersey

Dear Dr. Hildick-Smith:

I have in front of me a letter dated August 9, 1971 addressed to Dr. Selikoff indicating your wish to receive some information on the Tenovus sample that you so kindly lent to us. I have been putting off answering this letter not because I am a feisty devil so much as the fact that I lost the letter on my desk! I called your office last week. You were out and I feel that I would do as well to report to you in writing.

In respect to the Tenovus samples that were sent to us, we made the following observations. We did find some grains that resembled talc with the usual electron diffraction pattern consistent for a sheet silicate structure. Again, we have no definitive means of identifying the particle on the basis of its electron diffraction pattern in that many sheet silicates yield a similar array of spots. We assume that the particles were talc or, rather, were consistent with talc. We also got a few surprises in that we observed some chrysotile asbestos to be present in the tissue as well. We have been kicking this observation around the Laboratory for a while and we might consider a publication somewhere -- just a short note indicating that we have observed these materials present in the tissues.

We have also analyzed one of your talc samples in some detail. In addition to the normal platy talc present, we have observed many "fibrous talcs" as well. This fibrous talc material closely resembles normal platy talc but appears with a greater length aspect. Its terminations are prism terminations and

Dr. Gavin Hildick-Smith

November 10, 1971

Page Two

and the general characteristics under the electron microscope do indeed resemble normal talc. Electron diffraction on ~~these grains again yields~~ these grains again yields a talc pattern which is a very well-defined hexagonal array of spots. We also observed trace amounts of chrysotile asbestos only when the talc was sonified and markedly dispersed. The amounts of chrysotile are relatively small, occurring in amounts, we estimate, at less than .01%. The J & J baby talc is of quite high quality and as a matter of fact, in relation to the number of samples we have examined thus far, it is the "purest".

We just thought that we would pass this information along to you as our colleagues in scientific research and you may use it as you wish. Again, many thanks for giving us the samples and allowing us to look them over. Incidentally, I am very interested in obtaining some of your material called sodium sesquicitrate which has been bandied about as possessing a structure that is not unlike chrysotile. Do you think you could have one of your research boys send me some of this?

Again, many thanks, and if you need any further information, please don't hesitate to call on me.

Sincerely,



Arthur M. Langer
Associate Professor
Mineralogy

AML:1kh

Exhibit 65

August 24, 1972

Talc/Asbestos
SHOWER TO SHOWER Talc

Dr. R. A. Fuller

Dr. Weissler, Director, Division of Cosmetics, FDA, called us this afternoon to report that they had submitted a sample of SHOWER TO SHOWER previously examined by Dr. Lewin to the Sperry Rand scanning electron microscope facility this afternoon.

The report from Sperry Rand was that asbestos fibers could be detected in the sample. Dr. Weissler said that he has in front of him photographs of 6 fields at 12,000X magnification showing fibers with length to width ratios of 10-to-1 to 50-to-1, one of them appearing on top of a talc plate. He estimated that their diameter is less than .05 micron (about 1/10 of an inch in his photograph).

I asked Dr. Weissler if the Sperry Rand facility handles minerals. He said yes, they do a lot of work with chrysotile. I asked him, "Have they reported to you the normal background contamination in their samples. As you recall, this was the problem in Mt. Sinai's laboratories." He said no; however, he feels that the man who did the work is conservative and would not have reported chrysotile unless he was sure. I asked him if he has assured himself that the fibers were not tremolite which could be present in trace amounts. He said the fibers are characteristic of chrysotile and not tremolite.

I told Dr. Weissler that this information is completely at variance with the information we have from McCrone and from our laboratories. I asked him if it is possible for our experts to talk with Sperry Rand to resolve this question. He did not encourage this approach and said that he has the photographs in his office.

I told him that we will be in touch with him as soon as possible, either tomorrow or early next week. He said he will be available the first 3 days of next week but he may not be available after that.

Dr. R. A. Fuller

- 2 -

August 24, 1972

I asked him if he has heard from Dr. Lewin. He said, "Nothing definite, but he may have reported on optical microscopy; however, you know these fibers cannot be seen by optical microscopy."

W. Nashed

wn/cw

cc: Mr. D. Clare
Mr. H. Stolzer
Dr. A. Goudie
Dr. G. Hildick-Smith
Dr. R. Rolle
Mr. R. C. Stites
Dr. T. H. Shelley
Mr. W. Steinberg
Mr. E. G. Vimond
Mr. S. C. Smoyer

Exhibit 66

SEP 27 REC'D

*Johnson & Johnson**Asbestos in talc*

New Brunswick, N.J.

September 25, 1972

Subject: SHOWER-TO-SHOWER/Asbestos
FDA Meeting, September 21, 1972

Memo to File

Drs. Fuller, Hildick-Smith, and I met with Dr. Schaffner before the formal meeting. We requested that other industry representatives and CTFA not be present at our meeting. Dr. Schaffner said that he was not aware that we had made a point of this with Dr. Weissler when this meeting was set up. He said it would be embarrassing to him to withdraw the invitation. We agreed on the basis of no participation by CTFA and other industry representatives in the discussion.

We also requested that, in view of the fact that our data are now conclusive and contain new information on the composition of Italian talc which may explain the errors of Dr. Lewin, we be allowed to present the data first, to give Dr. Lewin a chance to gracefully withdraw from his position. Dr. Schaffner agreed.

The meeting was started on time and we were asked to present our data. The data were presented by our consultants in the order set up by Drs. Shelley and Goudie in a meeting on September 20 as follows:

1. Dr. Pooley reviewed in detail his comprehensive examination of the Italian mine, showing that it contains no deposits of chrysotile asbestos and very minor amounts of tremolite. He stated that mining is done by hand selection of rocks, which reduces further the likelihood of significant tremolite in the powder. He pointed out that the mine contained two species of chlorite ore which show X-ray peaks which could be confused for chrysotile asbestos. He also mentioned that the Italian Mining Institute at Turin has also determined no chrysotile asbestos in the mine. He presented data on SHOWER-TO-SHOWER and Italian talc samples provided by Johnson & Johnson England dating back to 1949, establishing absence of chrysotile asbestos by various techniques (EM, diffraction X-ray, and microscopy).

Memo to File

- 2 -

September 25, 1972

2. I reported on a communication from our supplier citing an analysis indicating absence of chrysotile asbestos in the talc supplied to us (actually this report was signed by Dr. Lewin but I did not mention this fact). I also reported that analysis of Italian talc at Harwell.A. E.C. supported Dr. Pooley's findings.

3. Dr. Brown (Princeton) and Dr. Buerger (M.I.T.):

X-ray camera technique - no chrysotile asbestos.

X-ray special techniques - no chrysotile asbestos

4. Mr. Caneer presented his findings on SHOWER-TO-SHOWER:

X-ray - step scan - no chrysotile asbestos.

Petrographic - no chrysotile asbestos.

5. Dr. McCrone, of McCrone Associates, presented a petrographic technique which is specific to chrysotile asbestos detection. He also had a demonstration with his own microscope for Dr. Schaffner to look at. He stated that SHOWER-TO-SHOWER contains no chrysotile asbestos.

6. Dr. Ian Stewart, of McCrone, presented his data by electron microscope and diffraction, as well as petrographic and X-ray, showing absence of chrysotile asbestos.

7. Dr. Schelz of Johnson & Johnson presented his technique of determining chrysotile by DTA. He showed that adding one percent chrysotile to our SHOWER-TO-SHOWER clearly showed in the DTA graph, where no peaks were apparent before, and concluded that SHOWER-TO-SHOWER contains no chrysotile.

Dr. Lewin provided two handouts of his analysis of two lots of SHOWER-TO-SHOWER, C512Z and 0709X1. In both cases he reported the presence of two percent chrysotile. His findings showed an X-ray diffraction pattern for both lots where a peak was labeled "chrysotile?". However, with the microscopy work, he could see it. He proposed a theory that chrysotile was in the process of being formed inside the talc platelets in a new form. Drs. Pooley and Hildick-Smith pointed out that only fibrous chrysotile is implicated in lung problems. Dr. Lewin had no comment.

Memo to File

- 3 -

September 25, 1972

Dr. McCrone reviewed the data by Dr. Lewin and pointed out a logical explanation for what Dr. Lewin was seeing, namely, the talc had not one but three refractive indices, and Dr. Lewin's observations only indicated this fact and not the presence of chrysotile. Dr. Stewart pointed out that Dr. Lewin's photographs indicated only talc shards.

Several more questions and comments were made by Dr. Buerger, Dr. Brown, and Mr. Caneer, criticizing Dr. Lewin's conclusions. Dr. Brown was very positive in his statement that the X-ray pattern presented by Dr. Lewin clearly showed the absence of chrysotile.

The meeting was beginning to deteriorate into a nonfruitful pathway. I interrupted to suggest a compromise, namely, that Dr. Lewin has carried out the procedure we had agreed on in the last meeting. It was obvious that the X-ray scan did not show definitive chrysotile, that microscopy was indicated, and since Dr. McCrone is very familiar with this technique, I suggested that the decision be made that Dr. Lewin work with Dr. McCrone to establish the best microscopy technique to be followed. Dr. Schaffner obtained agreement from Drs. Lewin and McCrone to implement this suggestion.

The meeting with our consultants was reconvened later at the hotel and they were asked to review their impressions of the meeting. They were unanimous in their criticism of Dr. Lewin and his findings, and they all individually agreed to present their views in writing. Dr. Fuller suggested that we convey these views to Dr. Schaffner and indicate that Johnson & Johnson will not accept any publication of Dr. Lewin's findings, which we consider to be an outright lie.

I called Dr. Schaffner the next day and conveyed that message. After thinking about it, Dr. Schaffner asked "Could we have these views in writing?" I said, "Yes" and he said "Could you put together all the reports and the views of the experts in one submission?" I said "yes."

I believe that Dr. Schaffner is now fairly convinced that Dr. Lewin's findings are not reliable. I don't expect that he will allow the release of Dr. Lewin's report.

Also, the assay scheme which will result will be acceptable to both FDA and industry.

W. Nashed
W. Nashed

wn/cw

JNJ00086531

Metadata

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Exhibit 67

TALC ANALYSIS (ASBESTOS)

PRODUCT NUMBER

1615

PRODUCT ORIGIN

Italy

DATE

June 12, 1972

LAB. REPORT NO.

WCD 6/72-1

CODE IDENTIFICATION

1615

PRODUCT LOT NO.

E.S. Laboratories

INVOICE NO.

1428

X-RAY DIFFRACTION ANALYSIS (PERCENT)

TREMOLITE N.D.

CHYSOTILE 1

ALPHA QUARTZ 1

CHLORITE 4

DOLOMITE 1

MAGNESITE 5

ND NON-DETECTED

CURVE FILED IN FOLDER NO.

7220

ES LABORATORIES XRD C 7220
8 S. Maple Ave.
Marlton, N. J.

CHEMICAL ANALYSES

609-983-3616

CUSTOMER: Whittaker, Daniels & Clark, Inc. **P.O.** Re: letter of Geo. Dippold **DATE:** 6-12-72

MATERIAL SUBMITTED: (3) Talc Samples DATE RECEIVED: 5-29-72

REPORT NO: WDC 6/72-1 **INVOICE NO:** 1428 **DETERMINATIONS AS:** present

XRD C 7220

Whittle, Clark & Daniels

#4609 Talc

6-9-72

Talc 86-%
Phlogopite 2-%
Dolomite 1-%
Clay 4-%
Magnesite 5-%
Quartz 4-%
Chrysotile 1-%

of sample
of talc

234 - Talc Dolomite
202 Phlogopite
2196 Magnesite
Clay 2.7
210 Phlogopite
203 Quartzite
201

40°

45°

Exhibit 68

JNJAZ55_000006532

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124728

Benelux B.V.

JF

Amersfoort / Postbus 188 / Nijverheidsweg Noord 86 / Telefoon 03490-14847 (4 lijnen) Telex: 40049 Jandj. nl.
Telegramadres: Jayanjay-Amersfoort / Bank: Amro Bank N.V., Amersfoort / rek.nr. 43.20.35.400 / Postgiro 413162 / K. Amersfoort nr. 16334

Mr. J.H. Smids,
to
Mr. H.L. Farlow.
Brussels.

Xx

G. Lee

Washed

Held Smith

goudrip

D. Farlow

To Take

UW REF.

ONZE REF.

MJMO/ThE

AMERSFOORT.

December 13, 1973.

subject: asbestos in baby powder.

Dear Worth.

Below a summary about this subject.

During the month August the Dutch Consumer Organization has informed us that they have determined asbestos in JOHNSON's Baby Powder.

According to their first test the content was 1,59%.

On our request they have tested another sample and the result of this second test was 0,3%.

During the period August/November we have had continuous contacts with them and we have supplied them with all the data and comments we received from Johnson & Johnson U.S.A. and Johnson & Johnson U.K..

We also asked them clearly not to make any publications about asbestos in baby powder, before we agreed with their findings.

Because they did not accept our arguments against their method of testing we have proposed a discussion between our experts and theirs.

We have tried this several times.

RECEIVED

DEC 27 1973

W. NASHED
JOHNSON & JOHNSON

Johnson Johnson
Benelux nv

124727

VERVOLGBLAAD 1.

2 days after the publication date we received a letter from them in which they inform us that they did not see any reasons to have a discussion about this matter.

This week we got their permission for a discussion with the laboratory which has carried out the tests.

This laboratory is the Central Institute of T.N.O. Delft.

This laboratory belongs to an independent organization which is subsidized by the industry and government.

This organization accepted a discussion about the subject.

So an appointment is scheduled for December 19.

The meeting will be joined by:

Mr. Pooley and Mr. Sloan of Johnson & Johnson England;
Mr. Isings and Mr. v.d. Burg of T.N.O. Central Laboratory;

Mr. Meijer of T.N.O.;

Mr. Groeneveld of the Dutch Consumer Organization;

Mr. Smids and Mr. Oerlemans of Johnson & Johnson Holland.

Attached you will find a translation of the publication of the Dutch Consumer Organization.

I expect this letter explains the situation.

Kind regards,

yours sincerely,


M.J.M. Oerlemans.

cc.: Mr. I. Sloan, J&J, Portsmouth;
Mr. P. Mc Kenna, J&J, Slough
Dr. T. Shelly, J&J, New Brunswick;
Mr. C. Foster, " " "

*Trademark.

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the Dutch Consumer Organization.

BABY POWDER

Even today books about baby-treatment state that baby powder is an efficacious remedy against red buttocks.

Therefore baby powder still belongs to the baby treatment products. However, recently alarming press articles spoke about hexachlorophene and borax which some trade marks should contain. And also publications about asbestos in talcum powder caused commotion.

As a result, various young mothers questioned us about the products they are using. We are answering these questions hereunder.

BRANDS AND PRICES

In the table the examined brands are stated together with the price per box. Because the contents of the boxes is different, also the price of 100 g powder is stated.

Usually refilling for a box can be obtained.

Also the price per 100 g refill-powder is stated in the table. Since we started our investigation, the production of some powders has been stopped. In as far as they were still obtainable, we thought it useful to add these marks to our tests and we are stating the results.

IS HEXACHLOROPHENE OR BORAX PRESENT ?

Hexachlorophene, borax and borax-combinations can be easily absorbed by the skin and can then cause poisoning symptoms. This absorption by the skin happens easily when the skin is irritated. And especially when her baby has irritated buttocks, the worrying mother will use the sprinkler with baby powder. That makes hexachlorophene and borax in baby powder more than undesirable.

As we can see it now, the use of both substances in cosmetic products will be officially limited within short. They will even be forbidden in baby products.

Various manufacturers, in whose products we did find hexachlorophene, informed us that they stopped their production or changed to another combination, anticipating the official regulations. In the near future most probably all baby powders will be free from the poisonous hexachlorophene and borax.

But it is not so far yet.

In the table we indicate the brands of the tested samples in which we found hexachlorophene, borax or both.

WHAT ABOUT ASBESTOS?

Talcum powders, which are used in the industry, can contain high percentages of asbestos.

This asbestos can be natural or can be added.

Whilst working with these powders, special security measures have to be taken, because asbestos fibres can cause pulmonary affections.

In view of the alarming press articles about asbestos in industrial talcum powder, we also tested our baby powders on asbestos.

They contained indeed asbestos fibres, but the quantity was so slight that we believe that the manufacturers pay sufficient attention to their choice of raw material.

Comparatively most asbestos we found in Scaldis, but also in this product the quantity was not alarming.

CONCLUSION

In view of the expected legal measures, in the future no hexachlorophene or borax will be allowed in baby powders.

At present it is still the case sometimes.

Also as far as asbestos is concerned, there seems to be no reason to worry.

THAT'S BETTER

Baby powder cannot prevent or cure red buttocks.

On the contrary: too much powder closes the pores, which makes the irritation even worse.

Best thing to do is to change the baby often, to dress him not too warm and to use as few waterproof plastic nappypants as possible.

Those who insist on using powder are advised to do so very cautious, so that the baby is not surrounded by a cloud of powder. Keep the powder out of reach of the child.

Whenever the baby sprinkles himself he can easily suffocate.

BE CAREFUL WITH ASBESTOS

The Ministry of Public Health is working at the moment on a so-called "asbestos-resolution" which will dictate the precautionary measures as to the use of asbestos in industries, to prevent inhaling of asbestos.

This resolution will only apply to the industry and not to safety at home, although protection against asbestos in the private sector is also urgently desired. For asbestos is worked up in a great number of things in our homes with which we come into touch.

Because it is proof against heat, wastage and aggressive chemical substances, asbestos is used a.o. for anti-fire materials, isolation materials and car braking systems.

Kind and price of the material made it also useful for a great number of applications in the house-building industry. Also the "do-it-yourself" man uses asbestos: worked up in very many different articles.

Those who work with this material often do not know that they handle asbestos, so a warning for caution has to be given.

We think therefore that a label, indicating a warning, is necessary. These warnings must tell the user that inhaling of asbestos-dust is a risk for the health.

In general the vibration-hairs of the bronchia can purify the entering polluted air. But asbestos-dust can be so small that the vibration-hairs can not catch them.

Therefore, people who daily work with asbestos can catch a so-called professional illness: "asbestose".

But also after less intensive contact with asbestos, pulmonary affections can be caught.

This can become manifest even after tens of years.

Except via warnings, the hurtful results of the use of asbestos can also be prevented by replacing this material - if possible - by something else.

For many professional purposes there are already replacement-materials available; and for others, e.g. in the house-building industry, the asbestos-fibres can be tied so that the development of asbestos-dust can be prevented.

Also hobby-shops and "do-it-yourself" shops should use replacement-materials.

If that is not possible, the "do-it-yourself"-man must be aware of the fact that thin asbestos-dust is liberated during activities as scouring, sawing, boring and filing.

That's why the material must be used wet, and in the open air so that the chance for inhaling is as small as possible.

In the household, asbestos-sheets are often used as flame-diminishers. These sheets can be easily replaced by small metal grills or double metal sheets.

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BABY- POEDER

Nog altijd vermelden mochten over babyverzorging dat babypoeder een probaat middel in de stegeen rots biljetjes is in de babyverzorging middelen neemt babypoeder dan ook nog steeds een vaste plaats in. Kom geleden echter was er al meer enkele berichten in de pers over het gebruik van boorzuur dat in sommige merken te wekt kan. En ook een publiekheid over best talkpoeder bracht de gemoeiden in beweging. Naar aanleiding van dit alles bereidde ons fabriek van jonge moeders die wilden weten wat er gesteld was met het werk dat zij gebruikte. We beantwoordden die vragen in het onderstaand

merken en prijzen

In de tabel staan de onderzochte merken met de prijs per strooibus. Omdat de inhoud van de strooibussen verschilt, daarnaast tevens de prijs per 100 gram. Meestal is een navulling voor de strooibus verkrijgbaar. Ook de prijs per 100 g van zo'n navulling staat in de tabel vermeld.

Sinds wij ons onderzoek startten is de produktie van enkele poeders gestaakt. Voorzover ze nog wel verkrijgbaar bleken, kwam vermelding van de resultaten ons toch niet overbodig voor.

zit er hexachlorofeen of boorzuur in?

Hexachlorofeen, boorzuur en boorzuurverbindingen worden gemakkelijk door de huid opgenomen en kunnen dan vergiftigingsverschijnselen veroorzaken. Dit opnemen door de huid gebeurt vooral gemakkelijk wanneer ze geirriteerd is. En juist in het geval van geirriteerde babybiljetjes zal de bezorgde moeder de bus met babypoeder hanteren. Dat maakt hexachlorofeen en boorzuur in babypoeder dus dubbel ongewenst.

Zoals het er momenteel naar uitziet, zal het verwerken van beide stoffen in kosmetische produkten binnenkort aan banden worden gelegd. In voor de baby bestemde produkten zullen ze zelfs helemaal worden verboden. Verscheidene fabrikanten in vier produkten wij nu nog hexachlorofeen aantroffen, deelden ons mee, dat zij, vooruitlopend op deze te verwachten maatregel, hun produktie reeds hebben gestaakt of op een andere samenstelling zijn overgegaan. In de nabije toekomst zullen vermoedelijk

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dat is beter

Met babypoeder vallen rode billempjes niet te voorkomen of te genezen. Integendeel, als er veel met poeder wordt gewerkt worden de poriën afgesloten, waardoor irritatie alleen maar erger wordt. Wel valt er wat te bereiken door de baby dikwijls te verschonen, niet te warm te kleden en zo weinig mogelijk gebruik te maken van waterdichte plastic luierbroekjes.

Wie toch poeder wil gebruiken, moet de bus omzichtig hanteren, zodat de baby niet in een wolk van poeder komt. En de bus ook vooral buiten het bereik van het kind houden. Als het zichzelf onder strooit kan dat verstikking tot gevolg hebben.

dus alle babypoeders vrij zijn van het giftige hexachlorofeen en boorzuur. Maar momenteel is dat nog niet het geval. In de tabel geven wij aan bij welke merken wij nog hexachlorofeen, boorzuur of beide in de door ons onderzochte monsters aantroffen.

zit er asbest in?

In talkpoeders, die in de industrie toegepast worden, kunnen hoge percentages asbest voorkomen. Die asbest zit er van nature in, of is er aan toegevoegd. Bij het werken met deze poeders dienen veiligheidsmaatregelen te worden genomen,

omdat asbestvezeltjes longaandoeningen kunnen veroorzaken.

Gezien de verontrustende berichten in de pers over asbest in industriële talkpoeder, lieten wij onze babypoeders ook op asbest onderzoeken. Zij bleken inderdaad asbestvezeltjes te bevatten, maar in dusdanig geringe hoeveelheden dat we mogen aannemen, dat de fabrikanten aan de keuze van hun grondstoffen in dit opzicht wel behoorlijk aandacht besteden; Verhoudingsgewijs de meeste asbest troffen wij nog aan in Scaldis. Ook hier ging het echter om weinig alarmerende hoeveelheden.

Konklusie

Gezien de te verwachten wettelijke maatregelen zal er in de toekomst geen hexachlorofeen en boorzuur meer in babypoeders mogen zitten. Nu is dat soms nog wel het geval.

Ook wat de asbest betreft blijkt er weinig reden tot ongerustheid.

voorzichtig met asbest

Op het Ministerie van Volksgezondheid en Milieuhygiëne wordt gewerkt aan een „asbestbesluit” dat het nemen van voorzorgsmaatregelen, voorstrijdt bij de verwerking van asbest in bedrijven. Dit om het inademen van fijn asbeststof te voorkomen. Dit besluit zal alleen voor de industrie gelden en geen betrekking hebben op de veiligheid in huis. Terwijl ook bescherming tegen asbest in de privé sektor dringend gewenst is. Asbest wordt namelijk verwerkt in een oneindige reeks van zaken, waarmee we in huis in aanraking komen. Omdat het bestand is tegen hitte, slijtage en agres-

sieve chemische stoffen, wordt het onder andere gebruikt voor brandvertragende isolatiemateriaal en remvoerlingen. Aard en prijs van het materiaal hebben verder geleid tot talloze toepassingen in de woningbouw. Ook de doe-het-zelver maakt gebruik van asbest: hij koopt asbestplaat voor zijn schuurtje, asbestplug, asbestkoord voor de knalpijp van de brommer, asbestdoek als hij aan het lassen of solderen slaat, asbestcement om een schoorsteenmantel te bouwen, enz. Wie met deze materialen werkt, weet meestal niet dat het om asbest gaat en dat voorzichtigheid dus geboden is.

Een etiket met waarschuwingen is daarom onzes inziens wel het minste wat we mogen verwachten.

Die waarschuwingen moeten de gebruiker erop attenteren dat het inademen van asbeststof risico's voor de gezondheid met zich brengt. Over het algemeen kunnen de trilharen van de luchtwegen de binnenkomende lucht wel van daarin zwevende vaste bestanddelen zuiveren. Asbestdeeltjes kunnen echter zo klein zijn, dat ze niet meer door de trilharen worden gevangen. Mensen die beroepshalve intensief met asbeststof in aanraking komen, kunnen hierdoor een beroeps-

	prijs per strooibus	prijs per 100 g in strooibus	prijs per 100 g in navulling	aanwezigheid van hexachlorofeen	boorzuur
BABYDERM	2,—	1,66	1,—		
BABYLANE	9,—	8,—	—	x	
JOHNSON AND JOHNSON	1,90	1,90 ¹⁾	0,95 ¹⁾		
MENTHO 10	1,25	1,60	—		
NATUSAN	2,23	2,62	1,92		
NIVEA BABYFINE	1,65	2,20	1,20	x	
NOTYOL	2,09	1,05	0,62		x
NURSIL	2,33	2,33	—		
PENATEN	2,—	2,66	1,33		
PUROL	2,—	2,22 ²⁾	—		x
SCALDIS	1,35	1,50	—		
UNICURA	2,50	2,50	1,87	x	x
VASENOL	2,04	1,77	0,95	x	
ZWITSAL	1,90	1,65	1,03 ³⁾		

¹⁾ in bus en navulling van 250 g: f 1,26 resp. f 0,80²⁾ in bus van 180 g: f 1,70³⁾ in verpakking van 200 g: f 0,76

x = aanwezig

ziekte – asbestose – optreden. Maar ook bij tijdelijke en minder intensieve blootstelling kunnen longaandoeningen optreden. Deze laatste openbaren zich vaak pas na tientallen jaren.

Behalve door waarschuwingen kunnen de nadelige gevolgen van asbest ook voorkomen worden door dit materiaal waar mogelijk door ander te vervangen. Voor vele professionele doeleinden zijn al goede vervangingsmateriaal beschikbaar en bij andere, bijvoorbeeld platen en buizen in woningen, kan de asbestvezel gebonden worden, waardoor het ontstaan van

asbeststof voorkomen wordt. Ook hobby-shops en „doe-het-zelf“ zaken zouden naar vervangingsmaterialen toe moeten. Waar dat niet mogelijk is, moet de doe-het-zelver zich er goed van bewust zijn, dat fijn asbeststof vrij komt bij het schuren, zaaghen, boren en vijlen. Daarom moet het materiaal zo mogelijk nat verwerkt worden en in de buitenlucht, zodat de kans op inademen zo klein mogelijk is. In huis worden ook vaak asbestplaatjes gebruikt als vlamverdeler. Deze kunnen gemakkelijk worden vervangen door metalen roostertjes of dubbelwandige metalen plaatjes.

AH-bemoeienis met PMC misère

In ons nummer van november 1972 publiceerden wij over de „misère met de PMC/Castor wasautomaten en afwasmachines.“ Het ging daarbij niet alleen over de vele mankementen die ons werden gemeld, maar ook en vooral om de wijze waarop PMC deze zaken behandelde. De Castor 2000 en 2000 de Luxe wasautomaten bleken – als gevolg van een konstruktiefout, die ook bij PMC bekend was – na twee jaar vaak een nieuwe motor nodig te hebben. Maar de garantie was dan afgelopen en de bezitter kon f 200 tot f 300 neertellen. De KM 8 afwasmachine had vaak te kampen met vastgelopen sproeiarmen en een spatscherf dat als gevolg van slechte montage afbrak. Maar beide zaken werden „geen technische storing“ genoemd en daarom niet in de garantie begrepen.

Inmiddels lijkt er een andere AH-wind door de PMC-winkel te waaien. Althans wat de KM 8 afwasmachine betreft verklaarde AH zich bereid om de machine bij meer dan normale slijtage te vervangen. Bezitters van deze machine, die menen, dat er in hun geval inderdaad sprake is van meer dan normale slijtage en reeds een blauwtje bij PMC liepen, doen er daarom goed aan zich alsnog direct tot AH Supermarkt N.V. te wenden. Dat geldt ook voor hen, die destijs onze hulp inriepen zonder dat wij, gezien de toenmalige starre PMC-houding, veel voor hen konden bereiken. De klachten te richten aan: AH Supermarkt N.V., Postbus 33, Zaan-dam.

Exhibit 69

JRM
✓
GC
for you
NEW BRUNSWICK, N.J. October

Johnson & Johnson
BABY PRODUCTS COMPANY

September 9, 1975

SUBJECT: A.M. Langer Analysis of Talcum
Powder Products
- Edinburgh Meeting

Bob Dean telephoned me just before noon to-day to report a call which he had received from Fred Pooley.

Pooley has just received Langer's manuscript contribution for the Edinburgh presentation (Langer and Pooley - "Chemical, physical and mineralogical characteristics of talc") and was very concerned over its contents. Langer's paper reports on his examination of some 33 finished talcum products which he had picked off-the-shelf in the past year. Seventeen of these are U.K. products and the rest, U.S.. Langer is claiming that he has detected chrysotile and amphiboles. He has identified the products by name and claims that he has detected tremolite and anthophyllite in Johnson's Baby Powder. As yet, Bob Dean has not been able to identify whether this JBP is U.K. or U.S. sourced. Pooley made this confidential disclosure to Dean, so that Bob could forewarn the U.K. companies and be prepared with refuting data. Obviously, the claim of chrysotile contradicts Pooley's previous findings.

Langer has also been devious in reporting the finding of over 1% Zinc in one of the products - obviously a formula additive -which was nevertheless reported by him as a trace metal contaminant!

Bob Dean will be speaking to Pooley again and will attempt to have access to Langer's manuscript. Bob will get more information from Pooley on the source of the JBP, the method of analysis and the level detected, before calling us back.

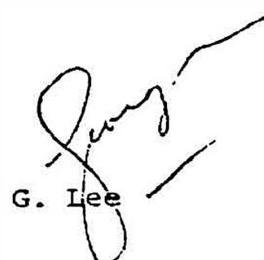
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We were advised of this information so that we can prepare our strategy for Edinburgh when Langer presents this data.

I have called George Sandland this afternoon to press him for copies of the U.S. manufacturers' and producers' testimonies of "no chrysotile in cosmetic talc". Since Langer uses X-ray Diffraction Step-Scanning for lower level of detection, I have asked Bob Rolle to initiate immediate testing of talc from the last year at this higher sensitivity.



G. Lee

pam

cc: Mr. W.H. Ashton
Dr. G. Hildick-Smith
Dr. D.R. Pettersen
Dr. F.R. Rolle
Dr. B. Semple
Dr. W.C. Waggoner

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JNJNL61_000064367

Exhibit 70

Alice M. Blount, Ph.D.
Mineralogist

April 23, 1998

M. Raymond Hatcher
MEHAFFY & WEBER
2615 Calder Avenue
P.O. Box 16
Beaumont, Texas 77704

Dear Mr. Hatcher:

RECEIVED

APR 27 1998

MEHAFFY & WEBER
BEAUMONT, TEXAS

According to your letter of March 31, 1998, I have written and enclosed a report on the occurrence, regulation and up-to-date scientific view of asbestos, amphiboles and "intermediate" fibers. I have also enclosed copies of my 1990 and 1991 papers, one of which I am sure that you already have. The 1991 paper was written because I became aware that it was a common opinion among industrial hygienists that industrial talcs were better than pharmaceutical and cosmetic talcs because there was a regulation for the former and not for the latter. I knew that this was not the case and wanted to set the record straight.

Although my papers report an improved method for analysis, the determinations for the sample labeled *I* (Johnson & Johnson's Vermont talc) have been done by the traditional methods as well (see Table 2, page 567 in the 1990 paper). As I told you, I believe that Johnson & Johnson's Vermont talc contains trace amounts of asbestos which are well below those specified by OSHA. It should be noted that the proposed FDA regulation, which was never finalized, also specified the same 0.1% limit for amphibole asbestos as OSHA.

I may be away for short periods during the coming weeks, but I do check for messages on my work phone at the number you have been using.

Sincerely yours,

Alice M. Blount

Alice M. Blount, Ph.D.

Box 3437
Rutland, VT 05701
Phone: 802-747-4857

e-mail: amblount@together.net

J&J-0020831

Exhibit 71

Meeting with Dr. Langer on July 9
Concerning Analytical Analysis of Talc

On Friday, July 9, I visited Dr. Arthur Langer, Mt. Sinai School of Environmental Science. The expressed purpose of this visit was to observe the preparation of tissue sections (from Tenovus Institute) for electron microscope examination. However, the subject of "asbestos" in JOHNSON'S* Baby Powder from Dr. Langer's point of view was also explored.

Analysis of the Tenovus Tissue Samples

34907 11

Only the tissue labeled submitted by
Uterus 1 Surface
us was of sufficient size to be prepared for electron microscopy. The tissue was sectioned and prepared by the method of Dr. F. Pooley. This method involved removal of the wax embedding medium, ashing away the majority of the organic matter in a 450°C muffle furnace, casting a polyvinyl alcohol (PVA) film on the ashed section, carbon coating the section held in the hardened PVA film, and transferring the section to an electron microscope grid by floatation on hot water. This technique if properly executed leaves sufficient relic of the tissue so that the trained eye can tell where in the tissue an observed particle is located. As no replication step is involved, ambiguities in the final preparation related to this step are removed.

Viewing the grids prepared on Friday at about 11,000X in the electron microscope, we were unable to find any particles which could obviously be identified as talc, however, fibrous structures were observed under higher magnification (30,000X and up) these fibers were identified by Dr. Langer as chrysotile. His method of identification is based on his experiences in observing the fibers of "pure" chrysotile under similar experimental conditions.

The characteristic density profile across the diameter of the fibers is observed at high magnification, and indicates the presence of tubular chrysotile. Evidence such as this was observed in at least one other field in the one sample which was examined.

Light and Electron Microscopy of JOHNSON'S* Baby Powder

Dr. Langer demonstrated his technique for observing "fibrous minerals" in JOHNSON'S* Baby Powder. He shook a small amount of the talc from the container onto a glass slide, applied a drop of immersion liquid (index of refraction in the neighborhood of 1.52) and a cover slip. After examining the sample in the light microscope for a short time he stated that he could pick up some non plate particles that could be amphiboles other asbestos forms, or fibrous

talc (or, in my opinion, talc plate fragments). He said he estimates the amount in this sample to be on the order of one or two percent. He indicated that he has observed the amount of "fibrous" content to vary from sample to sample. He had examined a JOHNSON'S* Baby Powder sample and that of a competitor (which resulted in Kretchmers press release) by the method stated above. In Johnson's Product he estimated 5%, in the other 25% of the particles to be fibroic of which some could be "asbestos". I stress that he makes no attempt to actually count the particles or to identify the fibers at this level of magnification.

Using electron microscopy Dr. Langer has demonstrated to me the presence of some very fine fibers at moderately high magnification which he identifies as chrysotile asbestos by the typical tubular appearance of the fiber. Photographs taken during the session at which I was present are appended.

The JOHNSON'S* Baby Powder sample was prepared for electron microscopy by sonifying a small portion of the powder in an excess of water (maybe 25 to 1) for ten minutes. The sonification served to break up agglomerated particles and to disperse the talc. A drop of the suspension was placed on an electron microscope grid and allowed to dry.

In addition to the observation of the tubular structures as an indication of chrysotile Dr. Langer also pointed out the typical thermal behavior of the fiber which is initiated by the heat generated at the sample by the electron beam. The mineral dehydroxylates and the surface of the fibers become amorphous. This process is observed as a slowly altering pattern of density in the microscope image. Eventually the crystal is so deformed by the heat that the fiber may appear to be segmented (~~see Figure 37~~). Although we did not perform selected area electron diffraction on Friday, Dr. Langer has observed these patterns from chrysotile fibers found in JOHNSON'S Baby Powder. Selected area diffraction patterns, though not necessarily specific for a mineral, do allow one to distinguish mineral fibers from non-crystalline artifact. It must again be stressed that Dr. Langer has, to my knowledge, made no particle counts with this technique either.

Summary

1. In the uterus sample from Tenovus, chrysotile rather than talc was found.
2. Chrysotile is identified in the electron microscope by its characteristic tubular appearance (at high magnification).

3. Light microscopy of JOHNSON'S* Baby Powder indicates the presence of fibrous minerals of which, according to Dr. Langer, some could be "asbestos". Neither true quantitative or qualitative analysis was performed.
4. Electron microscopy at high magnification shows a few fibers to be present in JOHNSON'S* Baby Powder which can be identified with chrysotile asbestos according to Dr. Langer. No quantitation was performed.

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